ROD & Custom

COMBINED WITH HOP UP

November, 1954 25c

HOW-TO-DO-IT *Flame Paint Jobs*

NAVARRO TELLS: What the Records Mean to YOU!

COMPETITION TEAMS BENEFIT SPORT

ORDER WITH CONFIDENCE

EASTERN'S 35th YEAR — THERE MUST BE A REASON!

FLARE SKIRTS

$6.95 pr.

All steel, prime coat.

- Ford '36-54
- Merc '39-54
- Chev '36-54
- Stude '35-52
- Ply., Chrys., DeSoto '35-54

BIG DISCOUNTS

Most up-to-date and complete catalog of Custom Accessories ever offered. Includes 1954 models. Jam-packed with loads of items not available in accessory stores. Complete sections on custom interiors, speed equipment, dual exhaust & header kits, too. **ORDER YOURS TODAY, send 25c to cover postage & handling.**

SELECT-O-DRIVE

Overdrive selector for any car with Borg-Warner overdrive.

ADVANTAGES:

6 forward speeds. 2 ratios in any gear. Clutchless shifting. Automatic hillholder. Longer engine & brake life. Less tire wear.

Factory price $10.95. **$4.98. Specify make & year.**

ECON-O-DRIVE—A push-button foot operated floor mounting unit with similar features indicated above **$2.49**

CHEVY CONTINENTAL SET

FITS 1949-52

$27.95

complete

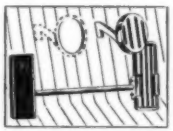
A complete continental kit with bumper extensions, splash pan, tire carrier, all-metal tire cover. Trunk opens without moving tire. No moving parts, no rattles. Not a falsie!

BULL NOSE MOLDING $3.95

1 piece FULL HOOD LENGTH, installs in place of original unit. Stainless steel, polished to chrome-like luster. Specify make, year.

Chev 1949-54, Chev 1940-41, Plymouth 1946-48, Ford 1949-51, Plymouth 1941.

LEFT FOOT ACCELERATOR



For trip, busy city driving. Frees right foot on hill. Clamps on. Easily removed. Fits any car . . . **$2.98**

"CADDY" HEADLIGHT RIMS

Beautifully chromed, replaces old rims. **$6.95 pr.**

FITS: Chevrolet '42-54, Plymouth '49-54, Buick '49-52, Dodge '49-54, Nash '49-52, Kaiser '47-52, Olds '48-53, Pontiac '49-52, Ford '49-53, Merc '49-51, Cadillac '50-53.

CUSTOM GRILLE BARS

"The finest single improvement in customizing a car." Heavy steel, beautiful chrome.

	Deluxe	Std.
1954 Ford	$19.95	
1953 Ford	7.50	
1949-52 Ford	19.95	$17.50
1949-50 Merc	19.95	17.50
1951 Mercury	22.50	19.95
1953 Chevy	12.95	
1954 Chevy	14.95	

- **Deluxe Model** is solid, 1-pc. unit without center molding.
- **Standard Model** is 2 pcs. with a center dress-up molding.

1949-50 Ford Grille Conversion Kit, Converts hood & grille without removing present molding. **$7.95**

1954 FORD

1954 CHEVY

PUSH BUTTON WINDOW LIFTS

$39.95

At the touch of a button — windows up or down — instantly. Effortless big car luxury. A genuine TRICO product complete for two windows. Incl. window lifts, switches, and all parts.

Ford 1935-54; Merc. 1939-54.

GENUINE CONTINENTAL KIT

Ford '49-54; Chev '49-54

$42.85

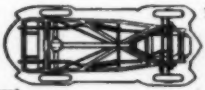
Kit includes full splash pan, metal tire cover, chrome hub cap, bumper extensions, all necessary parts.

Merc. $89.75; Stude. $89.75; Plym. $89.75; Buick $99.75; Olds. $99.75; Pontiac $89.75.

CUSTOMIZING KIT

Dechrome the easy way with Fiberglas. As strong as steel. Easy, economical. Fills in spots, holes, rust-outs. No leading, no welding, no soldering. Kit covers 3 sq. ft. Complete with instructions. **$4.95**

DUAL MUFFLER SETS



Complete with 2 steel packed mufflers, head pipe, tail pipe, brackets.

Ford-Merc '25-48 $19.95 set
Ford-Merc '49-54 21.95 set
Olds '49-53 $26.45 set Stude '51-53 $26.45 set

CHROME SPARK PLUGS

Chrome plated triple point spark plugs — Specify make and year.

99c

CUSTOM STEERING WHEELS

Ford 1949-54 $19.95

Ford 1932-48 $21.95

Mercury 1939-48

Solid plastic, two-tone, black & white. No chip, no peel. Chrome horn ring with Ford insignia in full color on brilliant gold background.

Free Flow EXHAUST HEADER SETS

Increases power, mileage, engine life. Deep mellow tone. Complete with headers, extensions, tail pipe, 2 steel-packed mufflers, brackets. Specify make and year.

Ford & Merc '35-53, $33.95; Ford & Merc '54, $39.95; Olds '49-53, $39.95, excellent power steering.

HIDE-AWAY REAR AERIAL KIT

3 Section beautifully chromed hide-away aerial, long lead wire for custom rear mounting.

Aerial with 180" wire $8.95
Dual kit (2 aerials), 180" lead . . . $12.50

CHEVY STEERING WHEEL

Original 1948 Chevy equipment. Fits all 1941-48 models. Factory list $10.25.

NOW ONLY $4.95

CUSTOM CHROME KNOB SET

$5.55 set

1952-3 Ford. Replace all the black plastic knobs with these identical chrome beauties. 17 knobs in set.

25% deposit on all orders. Prices FOB Los Angeles. Postage COD. Add 3% sales tax in Calif.

Eastern Auto
"CUSTOM ACCESSORIES"

3319 RC-11 SO. GRAND AVE.
LOS ANGELES 7, CALIF.

ROD & Custom

Vol. 2, No. 7 — **November, 1954**

- **Publisher** — **W. S. Quinn**
- **Editor** — **Spencer Murray**
- **Art Director** — **Wayne Bender**
- **Associate Editor** — **Bob Pendergast**
- **Advertising Mgr.** — **Marvin Patchen**
- **Photography** — **Spence**

contents

ROD and CUSTOM is published monthly by Quinn Publications, Inc., 4949 Hollywood Blvd., Hollywood 27, Calif. Entered as second-class matter at the post office at Los Angeles, California, under the Act of March 3, 1897.

SUBSCRIPTION PRICE $3.00 per year throughout the world. Single copy 25 cents.

ADVERTISING: Advertising Manager — Marvin Patchen, 4949 Hollywood Blvd., Hollywood 27, Calif. MIDWEST — Prendergast & Minahan, 168 North Michigan Avenue, Chicago 1, Illinois.

editorial

THE HIGH-BEAM ARTISTS

Have you ever encountered a high-beam artist? We'll bet you have if you've done much night driving. A high-beam artist is one of those unthinking, discourteous and downright stupid idiots who prefer to drive blandly down the road at night with their headlights sending a dazzling flood of illumination into the eyes of the unfortunate oncoming drivers. They apparently care little for the feelings and safety of the other people who share the road and who are forced to stare helplessly into the stabbing beams of light. Unfortunately, little can be done with these rude, unpolished drivers.

Experience leads us to believe that the greater percentage of high-beam artists are local inhabitants returning from an evening show or they are just out for an after dinner cruise. During the course of their short travels they like to not only see the squinting faces of oncoming drivers but they like to revel in the fact that they are enjoying a certain sense of recognition. To properly dip their headlights is to lower themselves to the level of peasants. Blinking your own lights frantically at a high-beam artist generally brings no response – other than giving you a fleeting glimpse of a blinded face undoubtedly frenzied at having anyone challenge his superiority.

To overtake a high-beam artist traveling in the same direction can be likened to condemning oneself to sheer torture. You may courteously dip your own lights to indicate that you intend to pass. Once ahead of the slower car you return your own lights to high beam – hoping the following car will, in turn,

(Continued on page 64)

Correspondence

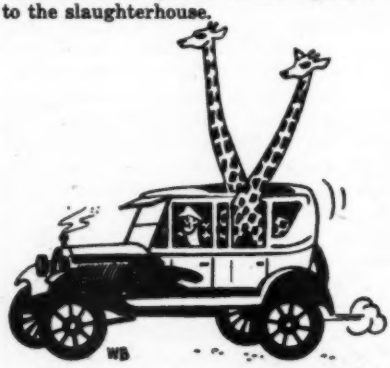
HARSH WORDS

While reading the September issue of ROD & CUSTOM I came across Tom Powell's letter (which should be called "Uncle Tom's Crabbin' ") which is typical of the Western attitude—"Why, tarnation son, no red-blooded Californian could be a squirrel – it must be them dad-gummed furrinera." If anyone so much as suggested that a native Californian owned a gook job he would be guilty of violating the Code o' the West (worse even than saying a Discouragin' Word) and would probably get his cottonpickin' neck stretched.

Next time Mr. Powell "travels the United States extensively" he should try to elevate his cultural standards and look more for the custom cars and less for the gook jobs – either that or buy a pair of bifocals. Sure, there aren't as many as on the West Coast – but after all, customizing has not been popular as long in these sections of the country.

Another thing, Tommy-boy made a big fuss over the question of originality in his letter. Well, I've noticed that many of the California customs follow pretty much the same pattern, too – "Look, Elmer, the grille on my custom is different from Herman's-across-the-street." Real originality – three cheers, two beers and a moldy pretzel.

I once had a 1924 Hupmobile which I customized so that it would be really different and original. First it was raised several inches by kicking down the rear crossmember and a raised front axle. The top was then heightened, using parts from an old poster bed. Then the whole thing was decorated with tinsel and colored lights and the exhaust pipes (all three of them) were routed out the cowl vent. The car caused considerable comment wherever it was driven. However, it was finally sold to a meat packing company where I understand it is being used to haul giraffes to the slaughterhouse.



Looking through the same issue I see that the Indianapolis Custom Auto Show was won by an Indiana car – not bad for a Middle-Western gook job, eh wot. Of *course* the show was fixed, the judges were all his in-laws, he sent his three-year-old son to bash in all the hoods but his with a sledge hammer, the California crowed was robbed, etc.

Also, did you notice that *not one* of the customs featured in the issue of R & C your letter was in was from California? How about that, Tommy?

If that last statement should cause you to cancel your subscription, try reading a copy of *I was a Squirrel for the Kustoms of America* by Iona Kaiser.

Robert Johnson South Haven, Mich.

P.S. You forgot to mention that Michigan State won the Rose Bowl game.

• *Yes, but a Californian won the Soap Box Derby!*

TRUE CUSTOM FAN (?)

I have just finished reading your Oct. issue. If you want my opinion, it should be classified as a comic book. Some of those so called customs and hot rods make me laugh! I nearly die laughing whenever I see a car so loaded down with lead that it sags. Why do these characters ruin a car that Detroit's designers have spent years to create by taking off all the beautiful chrome trim? Then there's those hot rodders – they obtain a beat up old heap, do a *little* restoring and call it a fabulous hot rod!

It seems that I'm the only one here in my town who has any sense. My car has a fine green and black paint job and lots of those wonderful chrome accessories which are far too numerous to mention. It has twin pipes, too, with a very wicked rap. I can tell from the looks on the faces of onlookers when I back-off down the street that they appreciate seeing a cleverly ornamented car. I would like very much to hear from some of the *true* custom car lovers – I'm sure there must be some around.
Don Moors Santa Rosa, Calif.

• *Drop by and see us sometime, we've got a cage ready for you.*

Competition Teams Benefit Sport

By Bob Pendergast

1 *for the money...*

2 *for the s*

3 *to get ready...*

and

4 *TO GO!*

Photos by Spence

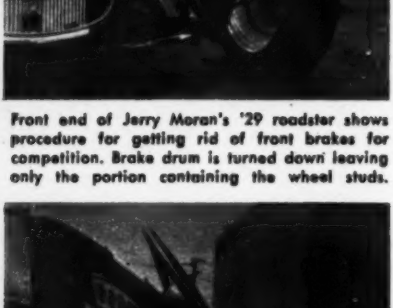
COMPETITION in class-type hot rod racing is getting keener all the time. The cost of racing is rising proportionately. Not only are individual competitors being affected, but the speed-shop owners as well. As the amount of money necessary to assemble a really first-class competition car has skyrocketed, the potential customer's shrewdness has increased. Instead of being overwhelmed by claims of what a given piece of equipment would do for his car, the average enthusiast has now adopted a "show me" attitude. There's only one way of showing him: proven superiority in competition! Whether a shop is selling equipment or skilled speed tuning, or both, makes no difference. Without a good competition record, the business isn't there! Some shops have built-up a car just for this purpose, and have established enviable records. Not all the concerns that have adopted this policy of personal participation in competition have reaped the full benefits of their success, however. Sometimes the building, tuning, maintenance and actual running of the car took so much time away from their regular business that it suffered, rather than benefited, from the proof of the shop's wares. Sometimes the shop concerned tied so much money up into their competition car that their stock of equipment fell low because there was no cash available for replacements. When the car went fast and the hot rod world beat a path to their door, alas!, no parts were available for sale!

A happy solution to the problem of proving the worth of their products while still remaining open for business was, for some shops, the sponsorship plan. It usually works something like this: a bright young man with a hopped-up car that is running in competition is not going as fast as he would like to. Lacking funds to purchase, in full, the necessary equipment or skilled labor he needs for an improvement in the speed of his car, he appeals to the shop owner for advice. If the owner thinks that this

Italmecchanica blower (roots-type) on Chapkis-Foster coupe boosts car into S.C.T.A. "C" division of engine size classification. This car now holds the "D" Coupe record at El Mirage.

Everett Israelson's '33 coupe is most recent addition to the team. Running 296 cubic inches of Mercury, the car competes in the "C" Class. May run Chapkis' blower at Bonneville meet.

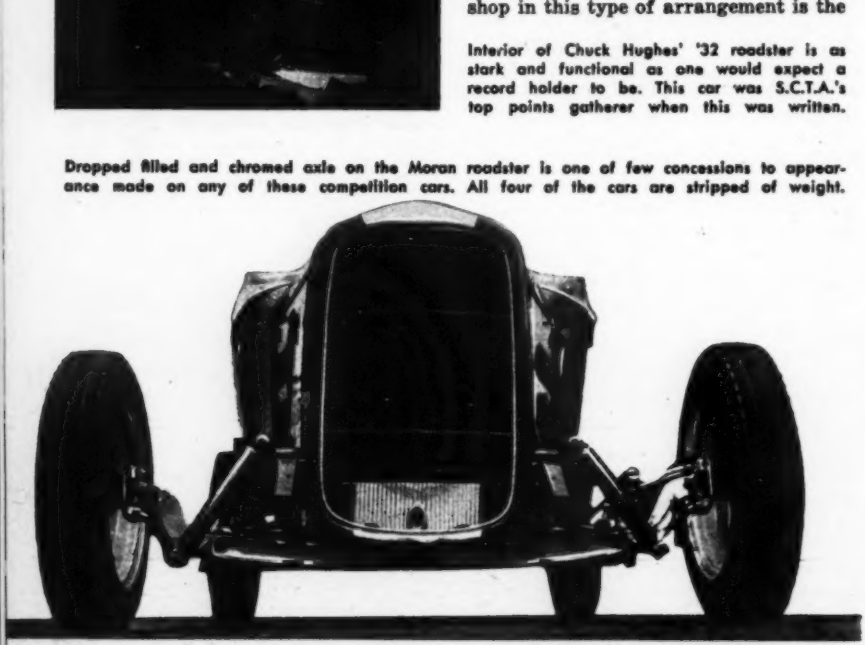
Front end of Jerry Moran's '29 roadster shows procedure for getting rid of front brakes for competition. Brake drum is turned down leaving only the portion containing the wheel studs.



Interior of Chuck Hughes' '32 roadster is as stark and functional as one would expect a record holder to be. This car was S.C.T.A.'s top points gatherer when this was written.

bright young man is bright enough to get his car really moving *if* he had the necessary equipment, the sponsorship usually becomes an accomplished fact. To what extent the shop takes the burden of the high cost of racing off the shoulders of the car owner depends on the circumstances involved. Usually, the shop sells the car owner the equipment he needs at a sizeable discount, somewhere near the price the shop itself pays for the parts. Sometimes labor is charged for at an equally low price, or perhaps some, or maybe even all the special work the car needs is free. How much the shop parts with gratis is based on how fast they think they can make this particular car go! The know-how of the owner, which will determine how much time the shop may or may not have to devote to keeping the car tuned for competition after it is completed, determines to a large extent how much of the preliminary work he is going to get done free. The main advantage to the shop in this type of arrangement is the

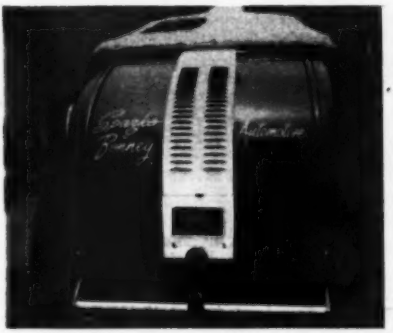
Dropped filled and chromed axle on the Moran roadster is one of few concessions to appearance made on any of these competition cars. All four of the cars are stripped of weight.



fact that the car shows the world what they can do without them actually having to build a car from the ground up, and then having to devote time to towing it from one event to the other, continually tuning as they go! It's cheaper for the shop, allows more time for the shop personnel to serve the new customers the car's performance record in competition is supposed to bring in, and gives the car owner a chance to prove if he "had as much loot as so-and-so" he could go just as fast! Even the cash customer benefits, for if he buys only from the shops that have proven their capabilities in the crucible of competition he ensures himself of getting the maximum amount of horsepower per dollar invested!

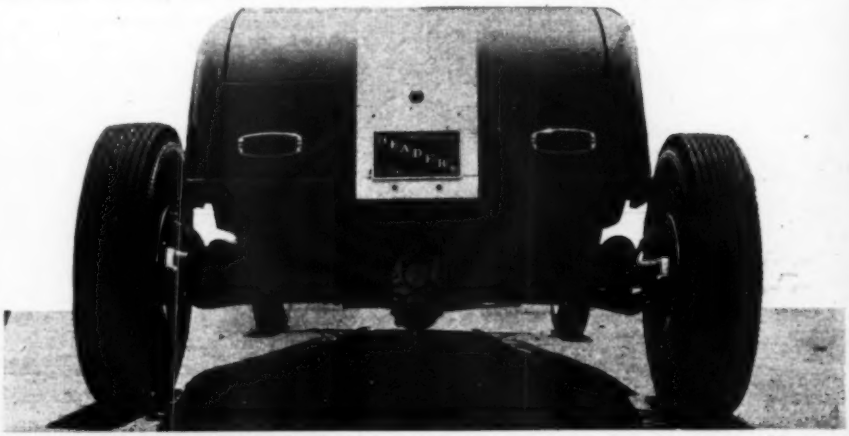
A typical example of the mutual benefit of this araranement to all parties concerned is the smooth functioning relationship worked between five members of the Glendale, California, "Headers" club of the S.C.T.A., and Tom Sparks and Ted Bonney, co-owners of

Israelson's coupe achieves pronounced rake through use of Model "A" rear spring in back and dropped axle in front. This is the only car in the team that doesn't have a Q.C. axle.



Rear of Chuck Hughes' roadster. Louvers may appear superfluous, but enough air was getting under tarp into decklid that rear end of car was getting light at speed. Louvers cured it.

Moran '29 has quick change rear end so essential to getting correct gear ratio when a change from one engine class to the other is made, which is something this team does often.



Front brake drums of the Hughes' roadster have had the same treatment as Moran's, but Hughes went one step further and faired in the cavity with a disc cut from a sheet of aluminum.

Sparks and Bonney Automotive, a Los Angeles speed shop that not only sells all the major-brand equipment items but also has the speed-tuning skill of its proprietors for sale!

The five members of the Glendale club who are sponsored by Sparks and Bonney Automotive have banded themselves into a four car racing team, complete with standard colors. But why sponsor *four* cars? Sparks and Bonney felt that just sponsoring one car would not be proof enough of their abilities because performance of one machine, even though it might be terrific, would not give a customer any indication that it could be duplicated. Four cars, all running in the top bracket of their respective classes consistently, would show that the sponsor's standard of workmanship must be equally consistent!

The four cars composing the Sparks and Bonney Racing Team are owned by Everett Israelson, Jerry Moran, Chuck Hughes, and James Chapkis and David Foster, who are the co-owners of the '32 coupe which holds the S.C.T.A. "D" Coupe record. Their car ordinarily runs with a "B" engine, however, and will run in both the "B" and "C" Coupe classes at Bonneville by the neat trick of running both with and without their Roots-type supercharger! The engine used for the record-breaking runs at the lakes was out of Jerry Moran's '29 roadster. In fact, Jerry hasn't even had a chance to run the engine in his own car as yet. Chapkis got hold of it first! Chuck Hughes' '32 roadster is, at the date of this writing, the top car in the S.C.T.A. point standings. Chuck holds the "D" Roadster record, and intends to keep it! Everett Israelson's '33 coupe has just started to "turn on" at the lakes, his best time so far being 133. However, Everett can look forward to much better times in the future!

The Chapkis-Foster car is a '32 three-window coupe, chopped four inches. Strictly a competition car, it features a complete lack of unnecessary frills. Brakes are mechanically actuated, on the rear wheels only. The interior has been completely gutted. A Halibrand quick-change rear end supplies a gear for every occasion. The engine is a '48 Mercury block bored out .125" to 3⅜" and de-stroked an eighth of an inch to 3⅜", giving a total of 259.5 cubic inches. This figure was no accident, for S.C.T.A.'s limit on "B" engines is 260 cubic inches! When running in class "C", the Italmecchanica blower is installed. With the compression ratio at 8.9 to 1, the fuel mixture must necessarily be a little milder when using the blower! The car runs without a radiator, transfer tubes being used to take over that function.

Jerry Moran's '29 roadster runs an even higher compression ratio, 10.8 to 1. Like the Chapkis-Foster coupe, it is a strictly competition car. Once again a '48 Merc block served as the basis for engine construction. This one was bored to 3 7/16" and stroked to 4⅛". Jerry's car also boasts a Halibrand rear end. '40 Ford spindles and hydraulic brakes, a '39 Ford transmission, and a '32 frame complete the basic components the car was built from.

Everett Israelson's '33 coupe has also been chopped four inches. Two wheel hydraulic brakes have proven sufficient at the end of his speed runs, which is the only purpose the car is used for. A 3:27 to 1 ratio Ford rear end transmits the power of the 296 cubic inch Mercury flathead engine. A bore of 3⅝" and a stroke of 4⅛" were required to get this displacement. 10 to 1 ratio heads are used on this engine. Zephyr gears in the transmission supply the close ratios necessary for drag strip competition.

Chuck Hughes' car is the '32 roadster of the team. This one has the biggest engine of the bunch, 314 cubic inches. The tried and true flathead Merc once again received the treatment, only this time more drastically! A half inch increase in stroke coupled with the 3 7/16" bore was necessary to arrive at the figure of 314. Another one of the Halibrand products graces the rear end of this '32 roadster.

All four of these cars have been consistent point-getters for the Glendale Headers Club, a fact which has been no small contribution to their points standing this season! At this writing, the Glendale Headers are in No. 1 spot.

These cars all have a few things in common. They all run Harmon and Collins cams and magnetos; Edelbrock heads and quadruple manifolds; and the port jobs, valve work, boring, and in fact all the machine work on the engines was done by Sparks and Bonney Automotive. Everything else was done by the owners themselves.

So what can we learn from this? That a team is still just that: everyone's contribution is indispensable. Without these five young men, Sparks and Bonney would have to figure out some other way of proving that they can do top-flight work on competition cars. And without Sparks and Bonney's sponsorship, these same five young men would still be just thinking about serious competition, instead of being part of it! ●

Headers on the Moran car are of the so-called "scavenger" type, so named because each port has a pipe of equal length extending back into a large-diameter collector-type header.

Interior of the Israelson coupe features the same lack of unnecessary frills found on all the cars of this team. These boys mean business, so if they don't need it, it doesn't go!

Converting black tires to white, for $9.95

WHITE SIDE WALL TIRES

—FROM A KIT.

Photos by Moon

SINCE ITS inception nearly two years ago, ROD & CUSTOM has tested, torn up, worn out, disproved and broken down nearly every accessory item it could get its hands on. Only the best and hardiest of these items received space in the magazine, the gimmicks and other obviously wasted-money gadgets were returned to the manufacturer with a sour note of disapproval. Those items that we *do* accept as being thoroughly practical, we show to our readers – usually with but little enthusiasm but always with accurate reporting. After being in this business for lo, these many years, one becomes accustomed to over-anxious salesmen eager for product notoriety, and even few good items move us to say more than, "That's *pretty* good."

However, excuse us if we rave about the Nu-Way white side wall kit. Here is an item so great, so practical and so reasonably priced for the value it lends to a Rod or a Custom, that to give this product the customary cold shoulder would make us feel as though we were cheating our readers out of something they rightfully deserve.

In a nutshell, the Nu-Way white side wall kit makes it possible to convert your black tires to whites in a short time and for an outlay of *less* than ten bucks—and nowadays that's something.

The kit *does not* contain a can of paint and a brush, nor are the included discs metallic or plastic in texture like those that were so popular immediately after World War II. The circular discs are *white latex rubber*, averaging 1/16" thick, that are bonded to the sidewall of any black tire – or white wall, for that matter, if your present whites are cracked or badly scuffed. Once applied,

Nu-Way white walls practically defy detection, will not chip, crack, peel or change color in any way, shape or form. And, R & C backs up that rather strong statement 100%. Those mounted in the accompanying photos were tested to extremes unheard of by the average driver and they are, today, exactly as they were when installed months ago.

The actual installation can be done at home using only a jack. *Nothing* in the way of tools or special information being needed outside of that included in the kit – you've got everything you need to convert your present tires once the kit is in your hands.

Dealerships are, at present, being arranged throughout the country so if your accessory dealer cannot supply you right away, just hang on for a month or two. If you can't wait, drop Nu-Way a note and you'll get your kit by return mail – providing your order includes your tire size. The bargain price of $9.95 is hard to believe, but that's what the man says. Address inquiries to Nu-Way Whitewall, Dept. R, 1797 W. Adams Blvd., Los Angeles 18, California.

This is a step-by-step rundown on the installation procedures. All you need is the kit and about two hours of time. ●

Nu-Way white side wall kit includes everything to complete installation – except the jack. Discs can be ordered with or without surface writing and for either 15 or 16 inch tires.

Installation is begun by marking width of the latex rubber disc on the tire. Surface beneath must be cleaned of road oil, dirt and the black paint used by some service station operators.

The car must now be jacked up so the wheel may be spun. Chalk is used to mark circle on tire denoting outer edge of white side wall. Entire job requires about two hours for four tires.

Sandpaper, supplied with kit, is used to rough up tire surface for good side wall adhesion, and to rid tire surface of accumulated scum. Tire is sanded only to width of the rubber side wall.

Time consumed by sanding black tire can be lessened if a body grinder is handy. A body shop would probably loan you a grinder, and a #24 disc, long enough to complete four tires.

The bonding agent, or adhesive, is liberally applied to rubber disc, then allowed to dry for approximately 15 minutes. The small brush used for applying the adhesive accompanies kit.

While adhesive applied to all four rubber rings dries, cleaning agent is used to rid tires of any dirt or rubber particles. Any foreign matter present will ruin proper bond of surfaces.

Same adhesive as used on rubber rings is now applied directly to the tire surface. Bonding agent is not allowed to set up completely as ring must be installed while it's still tacky.

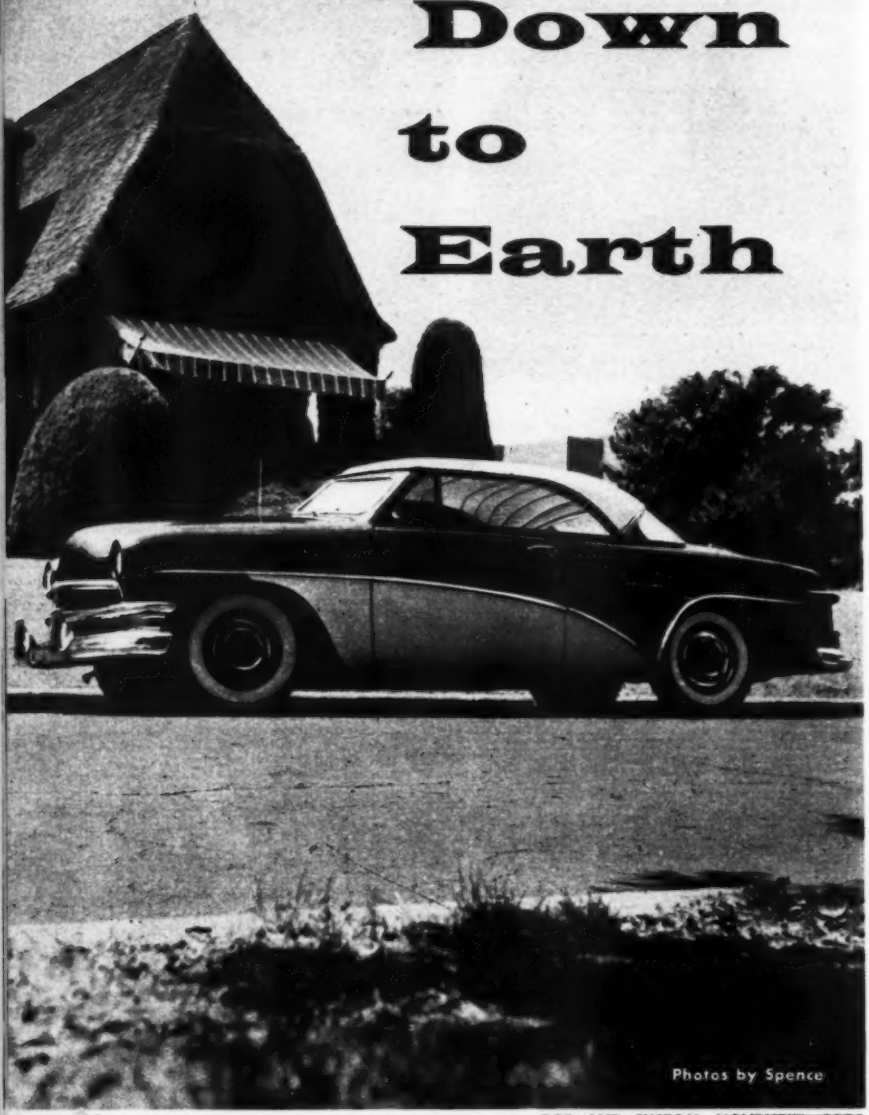
The ring is applied at this stage, beginning with inner edge and working around the tire. Outer edge is pressed down last, is done by working outward from inner edge, around tire.

Wooden roller, kit-supplied, is used to firmly press disc against tire surface — working from inner edge outward as before. Notice that inner ring edge is still hanging free of tire surface.

Final step is pressing inner edge of ring around wheel rim, is here being applied without removal of wheel balance weight. Job completed, tires can be dismounted without damage to white walls.

A non-convertible convertible.

Down to Earth



Photos by Spence

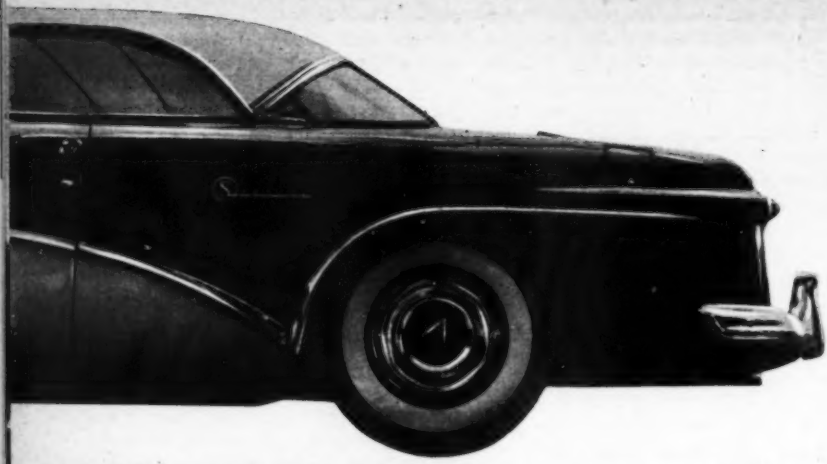
NOT SO very long ago, Cotton Woodworth found himself the possessor of a badly damaged '49 Ford convertible. He had come by the car through a deal with an insurance company who had written the car off as being too damaged to be repaired. Being the owner-manager of an Oklahoma City custom shop, Cotton swept out an unoccupied stall in his shop and parked the car to await what spare time hours he could find.

The original idea behind the purchase of the wreck was to fix it up as cheaply as possible and then sell it – which is quite often done with the result that the shop pockets a neat little profit, if they're lucky. However, as Cotton surveyed his purchase, ideas began to formulate in his mind and he started having visions of an outstanding custom. He had always wanted a Victoria but here he was stuck with a convertible. Why not, he reasoned, stick a Vic top on the '49 and thereby unconvert the convertible? Why not indeed!

A trip to the nearest Ford agency netted Cotton a turret top and a box full of related and necessary components. The top fit the body – but Cotton decided that a stock height car is nowhere. One thing lead to another and Cotton soon eliminated three inches of height from his windshield posts and the side glass frames. The rear of the Victoria top was dropped accordingly and secured to the body. Unfortunately, this top chopping business – regardless of body style – always brings up certain problems. In Cotton's case, the lowered top was now four inches too short to properly cover the cockpit opening. Remedying the problem was reasonably simple but it did involve a good many hours of work before completion. The rear seat and its supporting structure had to be moved ahead four inches. A strip of metal as long as the width of the cockpit was added to the rear of the body opening so the trunk area has, in effect, become four inches longer thus making up for the shorter length of the lowered turret top. Despite the time and work involved in this operation, the job defies detection proving the worth of careful customizing.

Following the trend of exposed rear wheels, Cotton opened up his rear quarter panels and added the chrome strip-

1954 Buick side trim enhances appearance of exposed wheels. Cut out was trimmed to fit the stripping rather than the Ford's tires. Buick theme was heightened by addition of "Special".



Top chopping and lowering combined to reduce overall height of the car by a healthy 6 inches.

Recessed headlights, straight bar grille and a filled hood mark extent of frontal alterations.

ping from a '54 Buick to make the alteration even more striking. Another problem was encountered here. When radiusing wheel cutouts, the general practice has been to scribe a line on the quarter panel by using a string and pencil and following around the panel with the wheel's center also as the marking center. However, the Buick trim proved to have a greater radius than the Ford wheels so the opening had to be cut a bit larger – reshaping a curved chrome strip being practically out of the question. The result is as was planned, and the rearward spear extensions are positioned neatly just below the stock taillight fairings.

The deck lid, stripped of its former ornamentation, features a flush mounted license plate. Access is gained to the trunk by pushing a neatly concealed button on the dashboard. The taillights were left stock but the separation between the quarter panels and the panels bordering the trunk lid have been frenched, or filled solid.

Deeply recessed headlights and a straight bar grille are featured up front. The familiar hood cutout has

Striking two-tone paint combination of Mandarin Red and white assists in hiding identity of the car. The Victoria top was chopped three inches and mounted to the 1949 Ford convertible body.

Top chop made it necessary to move rear window area ahead and add panel to rear of cockpit.

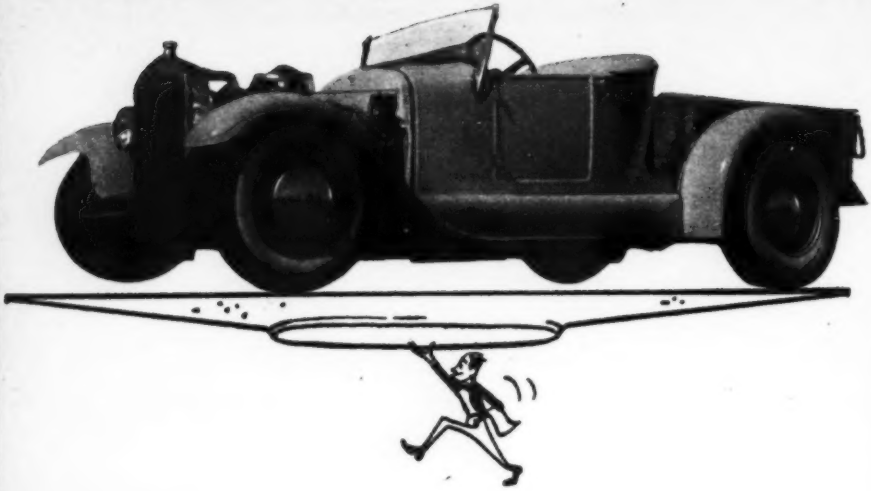
White Naugahyde interior constitutes internal customizing. Note red beading in headliner.

been filled and a slight peak runs down the center of the hood in place of the former small molding strip.

A beautiful multi-coat, two-tone lacquer job, of Mandarin Red and off-white, was laboriously applied. The unusual, for a Ford, paint job causes head-turning throughout the Oklahoma City area whenever Cotton drives his car down the street.

The finishing touches included an antique white, Naugahyde upholstery job from headliner to floormat. Lowering equally fore and aft brought the car down level in the best of custom tradition. Three inch blocks in the rear and reworked front A-arms did the job. Buick hubcaps form a sparkling center for the white wall tires and, to finish off the Buick theme, '54 "Special" insignias were spotted carefully on each quarter panel.

There's more work in store for Cotton's Victoria but as for what it'll be – the owner isn't talking just yet. It could be a sectioning job or a radical face-lifting – but we'll have to wait and see. For the time being, though, Cotton prefers to remain *Down To Earth.* ●



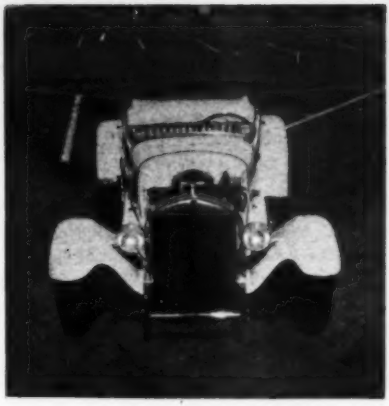
One T-Bone, RARE... but well done!

Photos by Moon

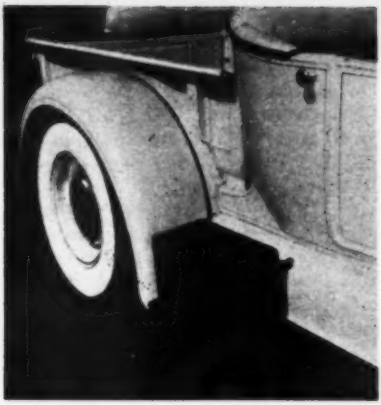
DON HENTZELL, proprietor of the Western Wheel and Rim Service in Oakland, California, has a rare dish of an automobile. 40-year-old Don's pick-up and delivery work connected with his wheel business is done by a knocked-out looking (and running) '27 "T" roadster pickup, powered by a Dodge "Red Ram" V-8! Two years of spare time and approximately two thousand dollars went into this "crazy little car" that fulfills a triple purpose: it's exhilarating to drive, decorative to have around, and last but not least, it is actually used as a pickup truck!

The fact that the car hauls wheels and rims around town should not lead anyone to believe that it's engine must be too feeble to race! Running in full street trim, this handy little vehicle turned 100 mph at the drags.

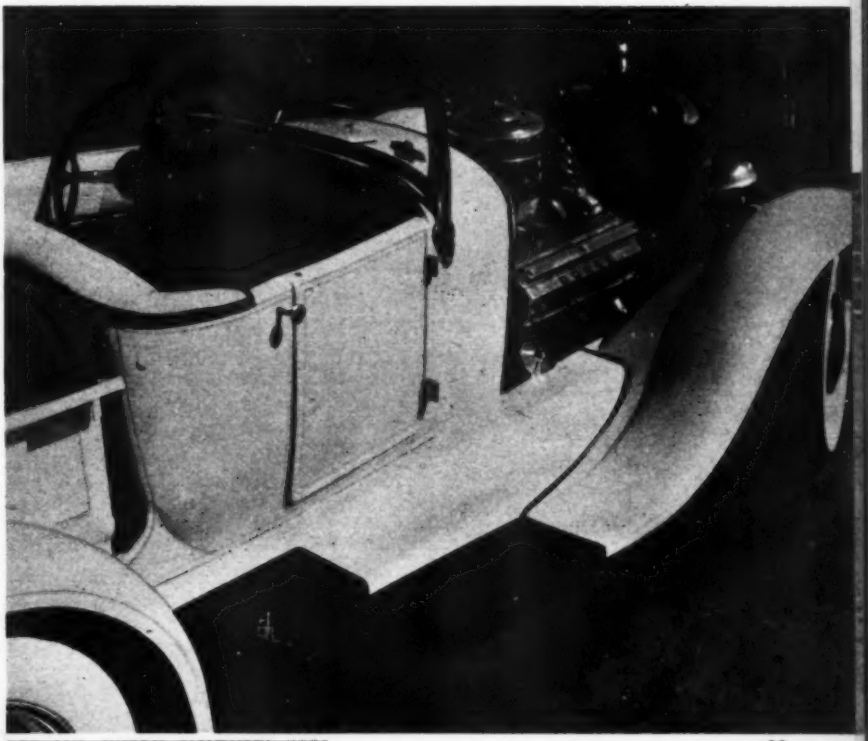
Performance is not the car's only striking feature. Its appearance is striking in itself. Yellow lacquer finish is contrasted with the black leatherette upholstery, which has been pleated and features bright yellow rolled caps. An antique tool box on the right rear running board contains the battery, another unique touch. Excellence of con-



Two years of Don Hentzell's spare time were required to construct this little gem. Bright yellow lacquer finish helps this outstanding T-V8 stand out from the usual mob even more!



Antique tool box was probably one of the many "doll-up" accessories offered for "T" when it was new! Battery is housed within this memory of bygone days. Note rear fender mounting.

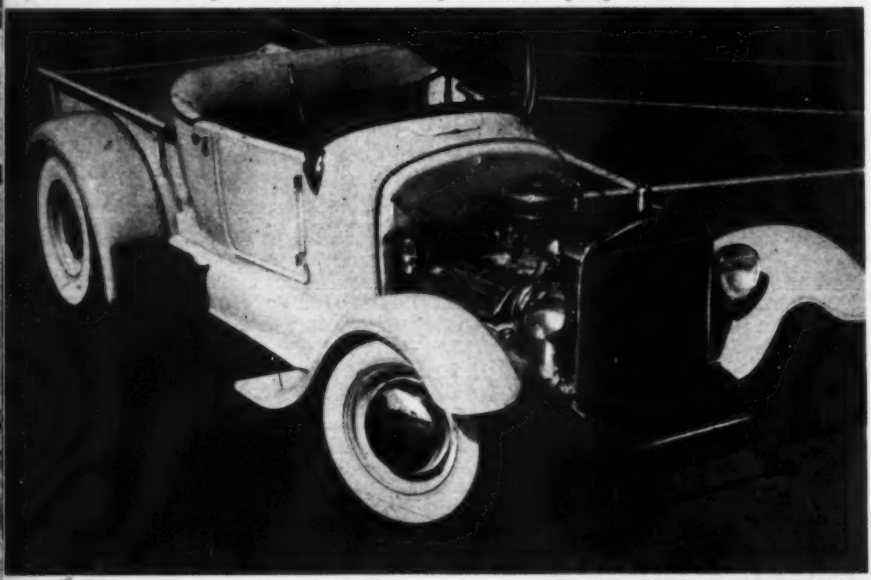


struction quality matches the standard established by the car's appearance. The '32 Ford frame has the horns bent up to support the pick-up bed. A '39 Ford contributed the front suspension, which was installed by using the split wishbone method. Steering gear, front axle and rear end are all from a '32 Ford. A 4:11 to 1 ratio ring and pinion combined with 25 tooth Zephyr gears in the '39 Ford transmission gives a set of closely-spaced ratios that should prove ideal for the standing-start quarter mile. A 10" Ford clutch mounted on a chopped Ford flywheel engages the power of the '53 Dodge V8, which has been slightly modified by the addition of an Offenhauser manifold mounting a Stromberg four throat carburetor, and a Mallory coil and condenser. Two stock Dodge exhaust manifolds, both originally intended by the manufacturer for the right side of the engine, are used. This gives a separate manifold for each bank of cylinders, and simultaneously does away with the inefficient cross-over pipe. Don's own shop contributed the special wheels for the rear end of the car. These wide-base rims, plus the construction of the rear fenders, give the car an illusion of extreme frame rake. Actually, the machine sits nearly level. The rear fenders, '29 Model A, had to be extended downward towards the running boards three inches in order to clear the oversized rear tires. This made the top of the rear fenders just that much higher than the crowns of the front fenders.

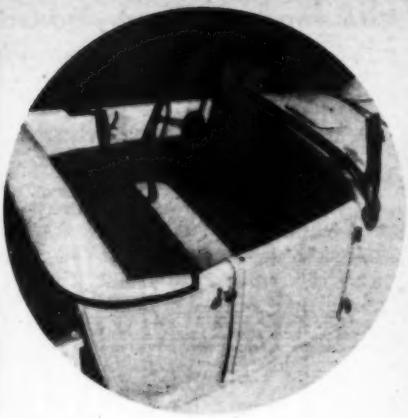
Don Hentzell tells us that he became interested in building up a hot rod through the influence of the young men who came into his shop to have special wheels made for their own rods.

Welcome to the sport, Don! ●

Deep-dish rear wheels were made at Don's shop. Extreme "rake" is illusory; rear fenders are three inches higher for clearance over larger tires, thus giving "down-hill" effect to the car.

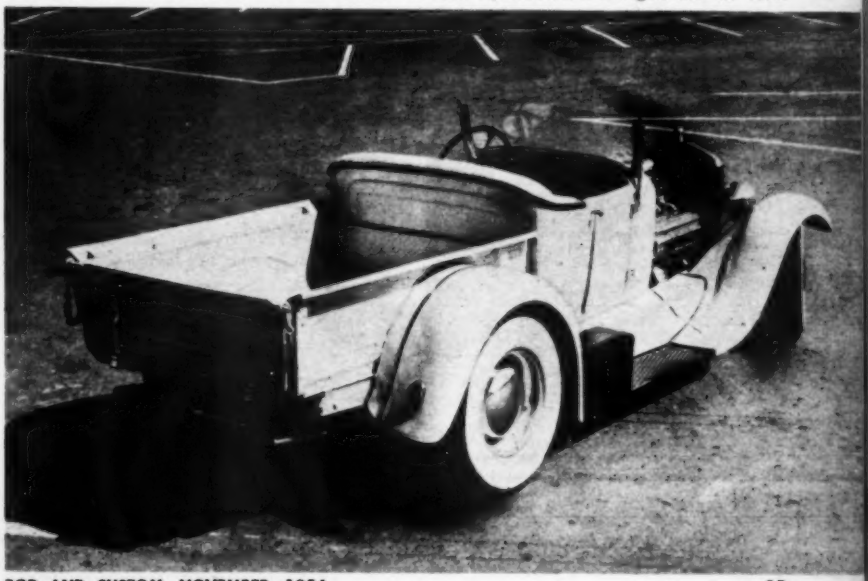


The '53 Dodge "Red Ram" OHV engine pulled the car an even 100 mph at the drags. At that time the car was running in full street trim, just as it's sitting here! Pump gasoline was used.



The interior of the car is a mixture of the old and the new. The stock "T" dash has been covered with black leatherette and equipped with Stewart Warner gages. Uses "T" gas tank.

Stock length pickup bed has proven ample for the light-duty hauling needs of Don Hentzell's business, the Western Wheel and Rim Service of Oakland, California. Taillights are '39 Ford.



Now you can have the added efficiency of dual exhausts without that annoying sound.

DUALS FOR A CHEVY

Photos by Spence

Parts slated for Chevy duals installation are new head and tail pipes, two mufflers, box of brackets, gaskets and reuse of altered manifold.

Stock '53 Chevrolet exhaust setup before addition of duals. Original left side head and tail pipes will stay, the muffler will be discarded.

DAVE MITCHELL, during the latter part of World War II, ran a small welding shop in the Pasadena, Calif., area. His business was composed primarily of work for a few of the many smaller aircraft sub-contractors in the immediate area. With the cessation of hostilities in 1946, Dave found his welding business falling off slowly but surely, so he began casting about in search of a new source of income – in the welding field as long as his shop was equipped for this sort of work.

Dave did a little work on a friend's street roadster if, for no other reason, to keep the doors of his establishment open. The sight of a half finished rod in front of a shop is enough to bring a good number of enthusiasts in off the streets. And in they came. Within a few months Dave found himself in the midst of the fantastic upward post-war swing of hot rodding.

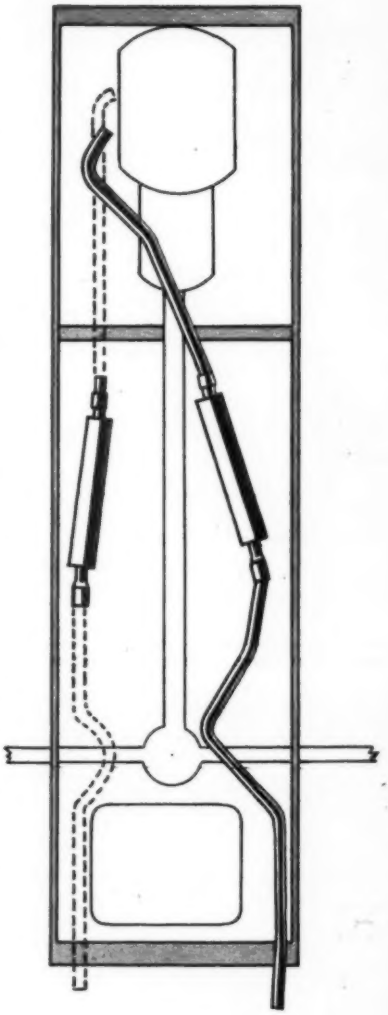
Eventually deciding to specialize in one or two phases of hot rod work, instead of trying to answer all construction requests, Dave turned to building dropped axles – "Dagos". From there he branched into headers and exhaust systems. His search for the perfect header lead into a research project on the many exhaust problems.

Soon after Mitchell had moved to his present location at 141 W. Green Street in Pasadena, he hit upon the answer to the problem that had been bothering muffler manufacturers for years. Rust! That was the problem. Mufflers are subjected to terrific temperature variations and quantities of moisture so it isn't long before a brand new muffler is reduced to worthless junk.

The solution lay in the use of a non-rusting material for the muffler packing. The material? Fiber-glass. It is, as you probably know, exactly what its name implies – fibres of spun glass – and glass won't rust!

The idea of stuffing steel cylinders with a plentiful material and selling them to the public sounded like a cinch – but there turned out to be more to it

Heavy lines in drawing below indicate location of new parts necessary, dotted lines show stock parts which will remain, all superimposed over sketch of chassis to show relationship to same.



"Mitch's Bomb", R & C for Sept. '53, carries shop slogan. The car is used daily for business.

Flange to be added to manifold for leadoff to right exhaust system is a Ford manifold inlet.

Text explains why baffle plate, here being installed, is needed to diminish sound volume.

than meets the eye. The exhaust gases must be allowed to expand into the Fiber-glass and it is through these expansion holes that success is attained or lost in muffler manufacture. Months of research went into the new muffler before Dave placed them up for sale – not until early in '51 were they made commercially available.

Other manufacturers were quick to follow suit, as is the case in a highly competitive business. They realized that the Mitchell Muffler was the best available and they didn't wish to find themselves selling the same old inferior product. Therefore, other Fiber-glass packed mufflers found their way to a waiting market but, unfortunately, few contained the research or time that went into Mitchell's products. The secret lay in knowledge of exhaust expansion, proper core length in relation to diameter and the size and shape of the expansion slots contained in the core. Dave knew these secrets and today his product is still regarded as one of the best available.

During this time Dave's original small welding shop had grown to include a manufacturing division, an outlet for speed and custom accessories and facilities for muffler installation with additional expansion continuing at a fast pace. The shop's rolling stock consists of an Olds powered, Model A pickup (Mitch's Bomb, R & C for Sept. '53) and a German Porsche roadster which has seen a good many road races and hill climbs – with Mitchell at the helm.

To provide our readers with an idea of how the shop operates, an unbiased rundown of Fiber-glass packed mufflers and a How-to-do-it for dual muffler installation, should the reader be interested in tackling this job himself, R & C recently paid Mitchell's Muffler Shop a visit with a '53 Chevrolet in desperate need of a set of *good* dual exhausts.

The first step along the road to dual pipe installation is the decision on the part of the owner as to the resulting

sound he desires—if he desires any additional sound at all.

The *tone* resulting from a dual exhaust installation is entirely dependent upon the firing characteristics of the particular engine, the design of both the head and tail pipes and the size and length of the exhaust extensions, or tips.

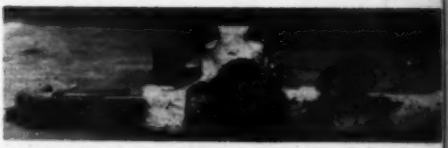
The *volume* of a dual exhaust setup is determined by the length of the muffler and its method of construction. Short mufflers make more noise than do longer ones.

A sound is hard to describe, harder still to write about and different people will have varying ideas about what they consider a "good" sound level. Therefore, when ordering dual exhausts, it is a good idea to check a car similar to yours that has been equipped with duals. Describe the installation specifications (size of mufflers, etc.) adding whether you want yours to sound either louder or softer.

The installation in question called for 22" Fiber-glass packed mufflers. Since the Mitchell glass-packed units are far quieter than steel-packs of the same size, it was felt that the short length would not result in indignation from the neighbors or upset the average peace officer who is constantly, it seems, on the lookout for these noise makers.

Dual exhaust installation on a straight 6 engine requires "splitting" the stock exhaust manifold or adding two headers. In our case we settled for dividing the original cast iron collector log and adding another outlet for passage of exhaust gas to the new right side exhaust system. One of the characteristics of the Chevy is its firing order. When dividing the exhaust manifold into two equal portions (front two exhaust ports leading to one outlet and the second two ports exiting to the added pipe) it may be seen that cylinder firing alternates between the halves. This, plus the fact that the 6 cylinder engine fires on every 120 degrees of crankshaft rotation is what gives a dual equipped Chevy its excessive noise.

Arc welder is used to unite Ford flange to the Chevy manifold. Special welding rod is needed.



Added exhaust flange toward rear of manifold will lead to entirely new right side exhaust.

Cut away of Fiber-glass packed, Mitchell muffler reveals the non-metalic, rust-proof packing.

Shop supplies exhausts for sports cars as this installation on Mitchell's own Porsche shows.

New head pipe is being installed from beneath car after reinstallation of the stock manifold.

Precision alignment of tips is necessary for appearance, marks completion of 4 hour job.

One answer to the quieting problem of a dual equipped Chevy is an *incomplete* blocking of the passage between the front and rear halves of the exhaust manifold, or the elimination of a block altogether. The latter is not generally done since the larger, stock outlet port would carry the major share of the exhaust gases while the added outlet would carry but a small percentage. This would result in an unequal exhaust system and while it would in no way be injurious to the engine, the resulting sound would not be necessarily pleasant. The solution lies in the use of a steel plate, welded inside the passage connecting the four exhaust ports, having an aperature for the equalizing of the exhausted gases. The size of the hole will determine the volume of sound that the tailpipes emit. The car illustrated was equipped with a manifold block having a ⅝ inch hole through its center.

The first step along the road leading to a successful dual pipe installation involves removal of the stock exhaust manifold. An added flange must be welded to the rear of the stock collector. The front end of a stock Ford (flathead) manifold serves very nicely. Mitchell's Andy Holloway, who was elected to be responsible for the illustrated installation, clamped the stock manifold in a vise and, using a jig, positioned the new flange in the desired location. Subsequently marking the placing of the flange, Andy cut a 2 inch hole in the cast iron manifold with a hole saw. The Ford flange was then arc welded in its proper position.

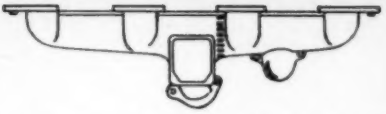
The aforementioned manifold passage block is the next step up the ladder to completion. Since Mitchell pre-cuts his blocks, no fitting or measuring was required before the arc welder was fired up. However, for the sake of those making their own muffler installations, here's how it is done.

Cardboard is an indispensable item around the home shop and it can be used to good advantage in this dual exhaust

project. Turning the stock exhaust manifold right side up, you will notice a large chamber. The general shape of the cardboard template may be judged by looking at the size and contour of the internal exhaust passage where it enters the chamber from the *rear*. (The stock exhaust outlet takes care of the forward ports.) By carefully trimming the roughly round template, it can be made to seat at the point where the exhaust passage begins to widen out for the larger chamber. When the proper contours have been attained, the outline of the template can be be traced on a piece of heavy gauge steel (⅛" or heavier will suffice) and the piece cut out. The equalizing hole for the exhaust should be drilled before the block is welded into position for obvious reasons. *Remember*, the smaller the hole the louder the exhaust note, the larger the hole the quieter the sound. A ¼ inch hole will give a sound lound enough to satisfy those desiring an ear-splitting rap while a ½ inch hole will render the duals scarcely audible. (The length of the mufflers used also affects the sound situation. A general rule could be set down which would state that short mufflers require a large equalizing hole, while longer mufflers need one considerably smaller in size.)

Replacing the manifold causes no particular headaches, however it should be kept in mind that new gaskets are essential to prevent exhaust leaks around the port areas. The stock headpipe should be re-bolted to its outlet before you move your tools beneath the car for the remainder of the job.

The kit supplied by Mitchell's Muffler Shop includes an exhaust crossover pipe for routing the gases from the manifold to the right side of the car. If you are limited to fabricating one from straight tubing, the accompanying illustration shows, as viewed from below the car, the approximate path it should take. Once the new headpipe is secured to the manifold a careful check should be made



Above sketch illustrates relationship of added rear outlet and the passage block (dotted line).

to see that it does not contact, or come extremely close to, any other objects, for if it does, rattles will be unavoidable.

Though much piping is to follow this stage of the game, it should be kept in mind that the hardest part of the installation has passed and you are well on your way toward completion.

Next on the list is the removal of the stock Chevrolet muffler. This is where a good many people run into difficulty. Months, some times years, of accumulating rust and scale fuses the slip joint between the muffler and the tailpipe so removal of one from the other is enough to drive normally sane people mad. It isn't really hard at all – if you have the proper equipment. First, the pipe clamp should be removed and set aside for use later. Heat applied to the slip joint will expand the outer pipe to the extent that a twisting motion applied to the muffler will break the bond and the two will come apart quite easily. (The fore end of the muffler and the headpipe, in this case, were one piece so the two had to be cut apart with a hacksaw.)

The new mufflers can now be slid over their respective head pipes and bracketed into position with clamps supplied with the kit.

Right side tailpipes are manufactured

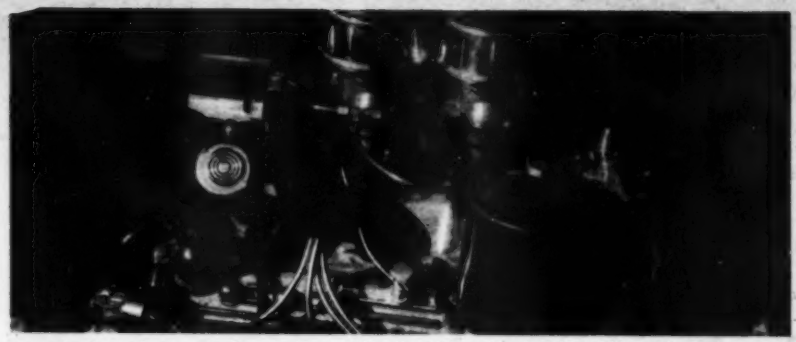
(Continued on page 56)

Expansion holes in slotted core, revealed here in cutaway, greatly reduce the volume of sound.

Go, Gendarme, GO!

POLICEMEN can be the strangest people. They're supposed to be mean, we hear, and they don't want anyone to have a good time, we are told. Frankly, we think we have been mis-informed. After looking at the car owned by Officer William C. Jeunette and hearing what he has to say about hot-rodders, we think that cops can be pretty good guys if they want to. Officer Jeunette is typical of law-enforcement agents who appreciate the finer things of life in the automotive sense of the phrase. He says, "As a member of the Arlington County Police Department, Arlington, Virginia, I have found that most honest-to-goodness-hot-rodders are really a swell bunch of guys who can depend on the backing of the Arlington Police Department 100%".

Jeunette's own personal car is a '49 Ford club coupe featuring custom bodywork, upholstery, and engine. The stock hood has been replaced by a '51 component. The top bar of the grille is also '51 Ford. Parking light mouldings from a '51 minus the lights themselves carry out the line of the grille's center bar, which is one of the solid type offered by accessory manufacturers for the '51 Fords. White-walls, chrome moon-discs and skirts dress up the car, which has had its appearance enhanced by being lowered two inches in the rear. Filling the hood and deck was the only major lead work incorporated into this car.



Beneath that glossy exterior dwells a deep-breathing 3⅛ by 3⅝ 296 cubic inches, well equipped with power-boosting modifications to keep anyone alert on even the longest trip!

Chevrolet license plate mounting vies with the filled deck-lid and the skirts for prominence. Good taste is evident in the moderate use of lowering blocks; just two inches in the rear.

The interior is black and white Naugahyde. Black and white carpets extend the color scheme down to the car's floor.

Actually, the most extensive modifications on this machine are under the hood. The '52 Ford engine has been bored to 3⅜" and stroked to 4⅛" giving a displacement of 296 cubic inches. Offenhauser heads, Edelbrock dual manifolds, an Iskenderian cam all do their part toward dragging that last horse out of the stable. A Mallory ignition furnishes the spark.

Policemen are just about as inevitable as death and taxes, but if they were all like William Jeunette car enthusiasts would find the world a better place to live in. ●

The interior of black and white Naugahyde is plush enough to suit the laziest lounge-lizard.

THE BARRIS KORNER

How-to-do-it

FLAME PAINT JOBS

After the car has been painted the main color, the area to be flamed is marked off with dark crayon according to the preliminary sketches. Holes in hood will accommodate bolt-on louvers.

FLAME PAINT jobs usually bring the comment "How did you do it?!" It's not done by some secret process but mainly by conscientious attention to even the smallest details. Being careful is 50% of the job. The other 50% is skilled workmanship. If both these vital ingredients are present in the proper proportions the result is a flame paint job that can be described as being 100%!

The technique of applying a flame paint job cannot be explained in words alone, so this month's Barris Korner will *show* how it is done. The first step is depicted in our lead-off illustration: sketching several proposed ideas for flames on a drawing of the car so the most suitable design may be selected before the actual work begins. The rest of the job requires neatness and painstaking care, which will be ultimately rewarded by the finished appearance of the newly painted car. ●

Masking tape, half-inch width, is used to separate outer edge of area to be flamed from the main color of the car. Additional flames within the area can be achieved with masking tape.

All areas not to be painted with flame color are masked off with paper and tape. Careful application of the masking tape will insure a finished job the car owner will be proud of.

Paint of a color to contrast with the rest of the car should be selected and applied to the areas left exposed after the masking operation. Trim and wheel masking must not be overlooked.

While paint is still wet outer points of flips can be "shadowed in" with a lighter color combination. This will give finished job effect of realism unobtainable by other techniques.

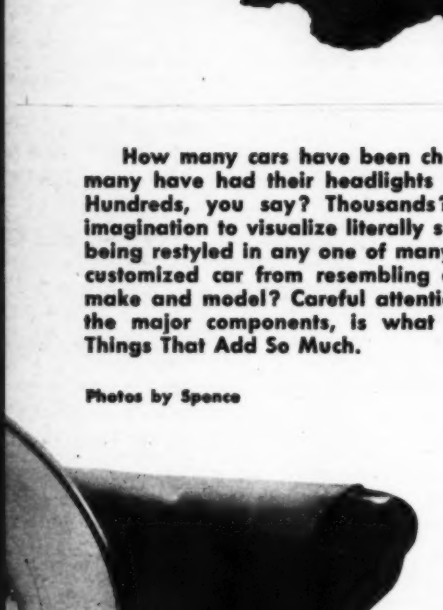
Extreme caution must be taken when removing masking tape. Direction of pull must be at a right angle, away from the direction the tape was applied, or the paint will come off, too!

It's a wild wagon! Bolt-on louvers promised in the first photo of this series have been installed. Notice how the contours of the flames have been plotted to flow around the louvers.

Those LITTLE THINGS That Add So Much

How many cars have been chopped? — how many channeled? — how many have had their headlights frenched, their hoods and decks filled? Hundreds, you say? Thousands? It doesn't take much stretch of the imagination to visualize literally scores of cars, trucks and station wagons being restyled in any one of many ways. What, though, is to prevent one customized car from resembling another as long as they are of similar make and model? Careful attention to the smaller details, rather than to the major components, is what makes the difference. It's Those Little Things That Add So Much.

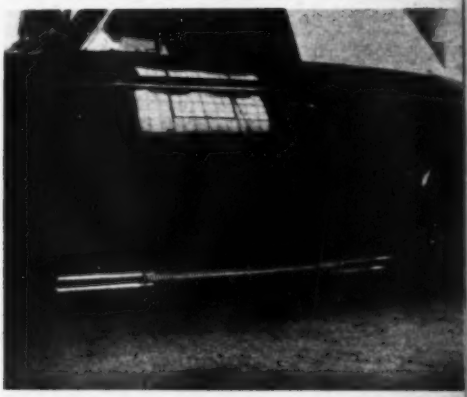
Photos by Spence



A WIDE VARIETY of taillight suggestions have been illustrated on these pages of various past issues — running the gamut from small, recessed dots of red glass to larger areas of translucent red plastic backed with many bulb units. Regardless of size and shape, all have one thing in common. They represent a concerted attempt by someone to improve the looks of their own personal car — anything rather than leave the stock units as the original manufacturer intended. After the fenders of this car had been extended rearward roughly 14 inches, the original light holes were filled and the surrounding areas recontoured to receive the protruding lenses from a '54 Packard Clipper. The lenses are retained to the light bases by hidden screws readily accessible from beneath.

The same '54 Olds 98 by Barris that provided us with the unique taillight example on this page appears here once again, this time with a novel headlight treatment. Tired of seing so many frenched headlights of the more common variety – with the stock headlight rim merely brazed to the fender, the Barris Kustom Shop has extended a shade over the bulb unit. This adds a definite mark of distinction to the big Holiday Coupe. Without the "different" styling treatments to the few altered components of this car it would not stand alone in a crowd of stock 98's.

Located in Burbank, Calif., the Valley Custom Shop never tires of tackling the difficult – idea-wise – and coming up with heretofore untried restyling gimmicks. The older cars, in particular, present the greatest problems for having been around for quite a few years, pre-war models have had just about every conceivable thing done to them by somebody or other. This 1940 Mercury in the photo is a perfect example featuring, in this case, the routing of an unusual-appearing exhaust system. Dual exhaust pipes extend through the base of each front fender, run back into chromed, protected mufflers, then end just ahead of each rear fender.



Many countless hours of sleep have been lost by numberless enthusiasts over the old fender skirt problem. Owners of cars that are factory-equipped with skirts take them off. Skirtless cars are adorned with skirts of all shapes and sizes. The past few years have seen increasing popularity in exposed wheels – though the trend is still the exception rather than the rule. The same Mercury convertible that Valley Custom Shop equipped with the odd exhaust setup shown here, also received a very singular set of skirts whose purpose it is to fill in the wheel well, yet leave a good percentage of the wheel exposed. The almost circular skirts are secured to the fenders in the normal manner. ●

A How-To-Do-It Feature

by Bob Pendergast

Supercharging The Mercury

Photos by Spence

The McCulloch Supercharger has become a frequent topic of discussion by hop-up enthusiasts. The editors of ROD & CUSTOM felt that their readers would appreciate a How-To-Do-It feature on the installation of one of these power boosters. Here it is!

PAXTON PRODUCTS, in Inglewood, California, install most of the McCulloch Superchargers sold in the Los Angeles area. They informed us that one Alvin Canup, of Alta Loma, California, was having a supercharger installed on his '54 Mercury Monterey. We immediately trekked over to the Paxton location so we could obtain a pictorial record of the installation procedure. This is what took place. Ready?

First the radiator was drained, the upper and lower water hoses disconnected, and the battery ground cable disconnected. Then the radiator was removed from the car. After the radiator was out it was relatively easy to loosen the generator and remove the fan belt and complete fan assembly. The next step was the installation of the supercharger drive pulley, which on this particular model car goes right on the stock main crankshaft pulley.

Next was the necessary modification to the car's fuel system required by the increased amount of air the blower pumps through the engine. After the air cleaner, the carburetor fuel lines, vacuum lines and linkage is removed the carburetor is ready for modification. The vacuum lines to the manifold are also disconnected to facilitate removing the vacuum fitting. A hose nipple from the supercharger installation kit is installed in the fitting after which the fitting is replaced in the manifold. This is necessary because the supercharger requires a vacuum line for its control mechanism that is not provided by the stock fitting. The carburetor is next. The cover is removed, followed by the secondary venturi tubes and secondary

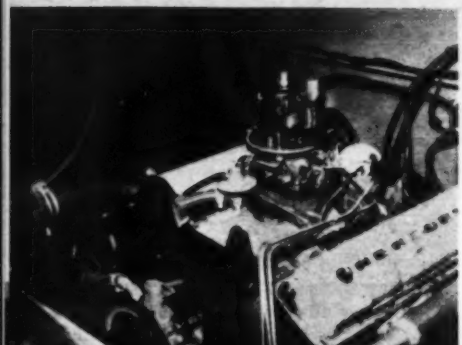
jet assemblies. The main jets are replaced by those of a larger diameter (carefully calculated by McCulloch engineers). The power jet gets the same treatment. The carburetor may now be re-assembled. A short length of hose from the kit must be connected between the hose nipple in the lower housing of the carburetor and the nipple in the cover of the secondary throttle actuating mechanism. The fuel pump must be removed and modified to permit pressure from the blower to be bled off to the underside of the fuel pump diaphragm, or there would be more pressure in the carburetor than in the pump. Parts are provided in the kit to do this job. They consist of a seal for the underside of the fuel pump diaphragm, a hose nipple threaded on one end, and a nut and washer to attach the assembly to the pump. It was necessary to drill a 5/16" hole in the body of the pump to install this assembly. The installation of the pump completes the modifications

This is it! The little cardboard box shown in this photo can give your car a 40% increase in rear wheel horsepower! Or rather, the contents of that box. But first you must put them on.

necessary to insure that the fuel system will be adequate even under the maximum output of the supercharger.

The distributor spark advance curve was changed to allow the full benefit of the blower's potential by installing the special vacuum advance unit supplied in the kit. Replacing the stock unit with this item was the only necessary ignition

This is what the box above contains. Everything needed to install a supercharger is included, right down to that last little machine-screw. The supercharger itself is in the upper center.



The first basic steps of the installation are underway. Radiator and generator have been removed and the top of the carburetor has been taken off to make the necessary modifications.

modification. The supercharger mounting bracket was then installed on the front of the engine. The generator and fan were also replaced at this time. The supercharger was placed on the mounting bracket and bolted up. With the supercharger in this position the manufacturer's name plate is very much in evidence. This medalion is not just a pretty decoration, however, for it houses the heart of the McCulloch Supercharger, the pressure control solenoid. This little apparatus controls the RPM (and therefore the boost pressure) of the blower in relation to the RPM of the engine. Before proceeding any further with the installation, the supercharger was oiled according to the manufacturer's recommendations, which calls for eight ounces of Mobiloil ATF 200. After the oiling procedure had been complied with, the oil pump was primed by sharply spinning the supercharger drive pulley a dozen times or so in a clockwise direction. The idler arm assembly, which was installed next, also required some lubrication. The

The Bendix electric fuel booster pump is being attached to the underside of the turtle deck flooring. This addition is a must, to insure fuel pressure equaling supercharger pressure.

Fuel system modifications completed, the supercharger itself is now mounted. Man in rear is tightening idler pulley bracket. Crank pulley for blower drive has already been put on.

mounting pins, bushings and idler arm were liberally oiled with a good grade of SAE 30 before assembly. The supercharger drive belt was installed and the pressure diaphragm switch was bolted to the blower housing and connected into the electrical circuit from the pressure solenoid. The vacuum hoses required were connected at this time. In order to insure adequate clearance between the drive belt and the upper water hose the radiator must be raised ¾". This was done by drilling new mounting holes in the radiator core ¾" lower than the original holes. The radiator was then re-installed and filled. The ground cable was then re-connected to the battery, but that didn't mean that the car was ready to run. The vacuum and electric control systems and the electric fuel pump installation had to be finished first. A hose from the blower to the mechanical fuel pump had already been connected, and a hose from the manifold to the pressure diaphragm switch as well. So now a hose

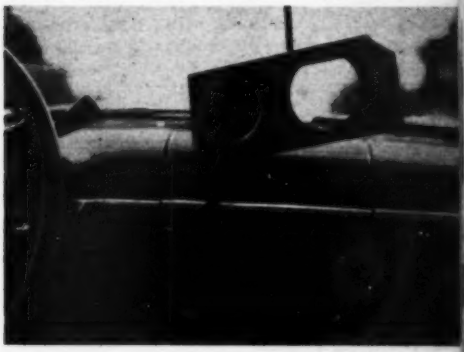
(Continued on page 60)

Wiring from boost pressure control solenoid to manifold pressure diaphragm switch is being connected. This switch also controls electric fuel pump operation, used only for full boost.

Before radiator can be replaced in car, holes must be drilled for its new mounting location. Reason for raising radiator is to insure ample clearance between drive belt and water hose.

Ready! Radiator installed, special air cleaner and induction tubing in place, car awaits its road-testing and final adjustment. On this installation, no adjustments were necessary.

Boost gauge shoots for the moon until five pound mark is reached where it holds steady until the throttle is returned to cruising position. Under steady throttle boost is about two pounds.

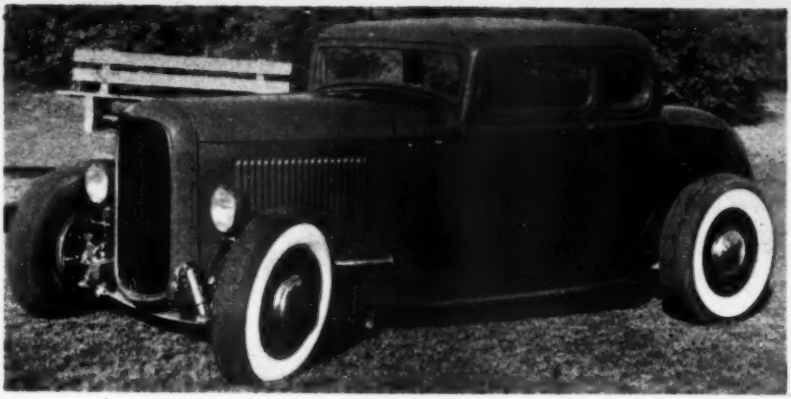


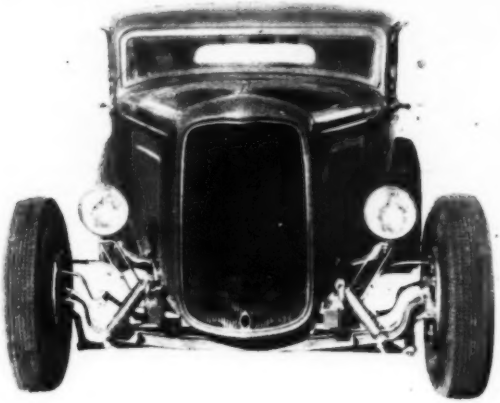
READER'S CAR OF THE MONTH

Photos by Dick Merrit

Tucson, Arizona, is the stamping grounds of this neat little '32 coupe, *pardner!* John Patrick is the proud owner-builder having spent two and a half years of spare time work combining such components as: the reworked '46 Merc block, '48 Ford juice brakes, '49 Ford instruments and a '48 Ford differential assembly.

A seven inch chop job considerably lessened the overall height of the rod and a stepped frame made way for a severe frame lowering job. The Zumanos Custom Shop is responsible for the fine metal work and the Coral lacquer paint job was applied by Charles Hall.





Engine additions consist of a Potvin "Eliminator" cam, a 3⅜"x 4½" bore and stroke job, Edelbrock pistons, Sharp heads and a H & C magneto ignition, Carburetion is provided by a Weiand 3-pot manifold with the carbs set up for alcohol-based fuel.

The car has succeeded in copping the coupe fuel class record at the drags held near Phoenix.

Further specifications are a 3.78 rear end, Zephyr gears, 8.20 x 15 rear and 6.40 x 15 front tires. Total weight of the coupe is 2,300 lbs.

Owner Patrick reports that the car presents a rather unusual sight on the streets of his home town – that particular part of the country having a low hot rod population.

Incidentally, that's pretty Miss Jean Foreman taking a look at John's engine.

* * *

We'll bet your car rates coverage on this page — reserved for readers' cars exclusively. Just send us complete photo coverage of your car together with a list of its specifications and a little of your own background. If your car is chosen for use on this page then you, like John Patrick whose car is shown here, will receive a year's subscription to R & C.

It's a cinch when you know
HOW TO DO IT

FORD TAILLIGHTS

Easily Installed Taillights—
for a Ford
A 10 minute installation.

Photos by Spence

THE DO-IT-YOURSELF craze that is currently sweeping the country shows a concerted nation-wide attempt to beat the high cost of labor. Naturally, the more tedious and difficult jobs should be left for the experts in each respective field but the average Joe can, and often does, complete reasonably simple projects without any outside help. Nearly all fields of human endeavor can be tackled by the inexperi-

The first step is to make sure that you have the proper Oldsmobile lenses. If they won't fit *inside* the Ford's plastic outer ring, you have the larger '54 lenses, not the '53's.

Secondly, *though this step is not necessary,* plastic protrusion of Ford lens is cut off with a hacksaw. This allows as much illumination as possible to reach the Olds lenses.

enced – particularly in the automotive line. And, the customizing of cars is not an exception.

The major difficulty experienced in customizing one's car is to find something that can be done to change the car's appearance without need for an expert body and fender man or without a garage full of special tools. However, there are a few exceptions, fortunately, that tend to disprove this rule. Any parts that can be lifted from one car and installed on another of different make and model without radical rework are deeply cherished by the enthusiast who is full of vim and vigor but lacks the cash to have the work performed by an expert. Chrome strips, skirts, special hubcaps and bumpers of all shapes and sizes can generally be added by the novice in his own garage for the installation of these items generally requires nothing more than spare time. Taillights, now, can be included in this list for at last a lens unit has been found that can be readily mounted on another car by the simple expedient of drilling four holes – a job that can be performed by anyone.

Roger Lawson, president of the "Musketeers" car club, ROD & CUSTOM for Oct. '54, recently availed himself of a '54 Ford. Not wanting to drive about in a car that resembled its thousands of brethren, he immediately added chrome wheel discs, dropped the rear end with lowering blocks and installed a set of dual exhausts. Then, he discovered that the taillight lenses from a '53 Oldsmobile 98 could be added to his car, or the earlier '52 and '53 models for that matter, without any alerations whatsoever (other than the hole drilling) to either the new or the stock items! In fact, removal of the Ford taillights is not even a requirement.

R & C happened by just as Rog picked up his small drill motor. We took one look, found that the lenses were purchased from an Olds dealer for $3.35 and duly broke out our camera to record the alteration.

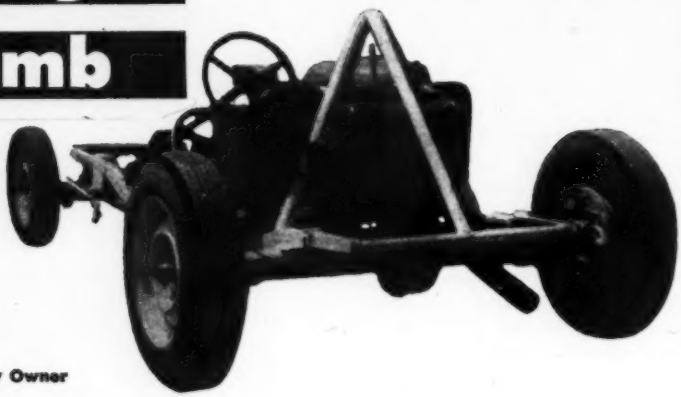
Next, carefully position the Olds lens inside outer Ford rim making sure that writing on the lens tip is horizontal. The lens is then used as a drill guide. The holes go through . . .

. . . the original lens and should be slightly smaller than self-tapping screws so tight fit is assured. The screws cost about 8 cents, can be purchased from any auto accessory dealer.

The final operation is the screw installation. Don't draw screws up too tight for plastic will crack. The custom alteration is complete when the above steps are done to the other taillight.

From Illinois comes this . . .

budget bomb



Photos by Owner

RON DeANGELES, a young welding shop owner in Maywood, Illinois, has performed a feat that should go down in the annals of hot rod racing right alongside the fastest times ever turned at Bonneville! He has built a rail job, a true competition car, for thirty-two good old American bucks! This sum represents the only actual cash outlay involved in building up the car. How? Ingenuity!

Ron is no newcomer to the hot rod sport. He has attended the Bonneville meets and has competed at the Half-Day, Illinois, drag strip in his '46 Mercury convertible. However, the Merc is a relatively heavy car for the purpose of drag racing, and Ron wanted something that would really give him that "kick-in-the-back" sensation when getting under way. Looking about his shop, he discovered that his only assets in the way of potential construction material were what anyone in their right mind would refer to as just plain junk! Approximately a half-ton of it. Well, the lighter a car is the better it goes, so Ron figured a half-ton would be just about right! The only thing remotely resembling an engine in the conglomeration Ron had accumulated was a tractor mill! Nobody has ever set the world on fire with a car featuring tractor-power, but Ron wanted to build a dragster and was not preoccupied with what he could get out of racing in the way of glory, publicity, trophies, etc. (It's too bad more of our hot rod enthusiasts don't care as little about these things as Ron does.) All Ron wanted to do was get something together he could run instead of his Merc. So, without any thought of cubic inch regulations, classes, points, awards, etc., he proceeded to build the hottest thing he could with just what he had in the junk pile plus whatever he could pick up for as little cash outlay as possible.

The tractor engine was a Ford Ferguson four cylinder flathead. These engines were once very popular in midget race car circuits where Offenhausers were prohibited. This would lead one to think that quite a bit of speed equipment would be available for these engines, but so far, all he has been able to obtain is a reground cam, a Harman-Collins to be exact. However, not find-

Aside from low cost, one advantage to using a tractor engine is the magneto ignition with which they frequently come stock equipped. The safety belt keeps the driver away from header.

ing speed parts forced Ron to make his own conversion, thus helping to make the car even cheaper than he had expected. Welding shops have been known to "fill" cylinder heads, and Ron's was no exception. That's how the "Fergy" got its 10 to 1 ratio! The intake and exhaust manifolds were made up out of steel tubing. Two Carter carburetors which originally did service on a Studebaker Champ mix the fuel and air. After the flywheel had been chopped to a weight of 6 pounds, the engine was ready for installation in the chassis. And what a chassis! We told you that the car sprang from a conglomeration, we meant it, so hang on! A *Crosley* frame, front axle, spindles, steering and front wheels; a Mercury rear end (3.54 to 1), a Ford transmission, and of course the fabulous tractor engine! Hooking up a hand brake mechanism to operate the rear wheel hydraulics, throttle linkage, and all the other little details necessary to get a car running still didn't push the total construction time over *two weeks* of *spare* time effort! That's fast! In fact it was so fast that Ron neglected to inquire when the next drag meet at Half-Day was to be held. Much to his chagrin, he found out (after he had completed his car) that the Half-Day strip (which is the only strip within reasonable driving distance of Maywood) had been closed until further notice. So, here is Ron's "budget bomb", all hopped-up and no place to GO! ●

The conservatively estimated output of the modified "Fergy" mill is 75 HP, which should be sufficient to accelerate this car quite well since it only weighs 780 pounds ready to run!

In the Modern Manner

Photos by G. Hill

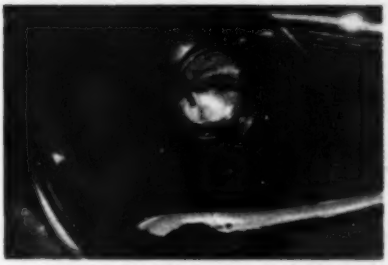
MEL LEHMAN'S '40 Mercury four-door sedan is furnished quite handsomely with just about everything a custom fan could desire. And the view, particularly through the panoramic rear window, is certainly unequaled in cars of this type! But how did this real-estate-agent's-dream on wheels come to be this way? Four months of work and nearly three thousand dollars ago, Mel, of Fresno, California, decided he wanted a custom car that was different. Four-door sedans are not traditional customizing material, apparently for the reason that they are awkward (to say the least) to chop! However, if a top chopping orgy is not contemplated there is no reason why a four-door could not be just as sharp as another body style. With the current emphasis being placed on square feet of glass area by the stock car manufacturers in Detroit, it seemed kind of mid-Victorian to cut this area down while all the new cars were building it up! The windshield would require *raising* the top to increase the glass area! Never! Aha! The back window! This particular model was never famous for its rearward visibility anyway! Gordon's Custom Shop, who had been doing the more conservative custom modifications on Mel's Mercury, received young Lehman's suggestion regarding the substitution of a '50

Ford rear glass for the stock item, and when Mel dropped over the very next day to see how work was progressing, the installation was complete!

The sweeping view is not its only outstanding feature. The headlights are a wonderful example of drastic looking modification which is relatively simple to do. The stock Mercury headlight doors, as they are known in the trade, were reversed and welded to the underside of the fender. Standard procedure then took over in regard to the smoothing of the resultant seam.

Lest some of our more competition minded readers think this car is slow, we will hasten to relate that Mel Lehman's definition of a custom car included a custom engine. A 59AB block was procured, and work began. After being ported and relieved, and bored and stroked an eighth of an inch each, the engine was balanced and assembled using Navarro heads of 9:25 to 1 ratio combined with an Edelbrock triple manifold. A Harman-Collins cam gives the valves the boost they need to get this sumptuous living room on wheels into motion with rapid acceleration

Mel Lehman has succeeded where others have failed in the never ending quest for individuality in modes of transportation. ●



Tunnel-like headlight openings are one of this car's outstanding features. They were not as difficult to do as they appear. The stock rims were reversed and inverted to fit.

The furnishings of the interior are all one would expect of a place with a view! Pleated and rolled leather upholstery contrasts nicely with the chrome plated window reveals.

'48 Chevrolet bumpers, filled and then cut out for the license plate, match the car's new contours. Filled deck, frenched rear fenders, and the special tail lights complete the rear end.

Front fenders were frenched into the running boards and body. Running board smoothing required the filling of 362 holes! Small crest on cowl panel contains push-buttons for doors.

With most custom enthusiasts the purchase of a pair of skirts for his car is the first step towards the completed job. Not so with Lehman, however. His car looks much better without.

Navarro Asks—

What Do The Records Mean to YOU?

Performance factors you should know.

By Barney Navarro

"WHAT'S SAUCE for the goose is sauce for the gander", may well be a time-honored saying that applies to human behavior, but its application to engine performance needs a bit of tempering. We find too-many speed and performance enthusiasts that are prone to compare their individual engine building problems with those of the reputed speed kings. Just because a certain practice apparently makes "200 mile per hour Joe" a hero in speed circles is no reason to assume that the application of said practice will make the family sedan conform to your fond dreams. Physics and chemistry determine engine performance, so dreaming will do very little toward helping your cause unless basic principles are part of your thoughts.

When attempting to improve the performance of an engine, the all important points that must be considered are the purpose of the power plant and the performance characteristics desired. If you have a car that grandma must drive occasionally, you certainly don't want a machine that has such a radical cam that plugs foul at 20 miles per hour in high gear. Maybe grandma doesn't drive your car but you occasionally want to drive slowly without the annoying buck that results from too much valve timing and over carburetion.

Improving the performance of your car is a more complicated procedure than merely reading a few ads that state more horsepower and then rushing out and buying those items that are accompanied by the biggest numbers and the most speed records. Carried to a ridiculous extreme, such a practice could result in a contrivance that would run like an engine in the last stages of

Dragster-like performance is only available with a dragster-like body configuration. To attempt to run equipment similar to that used by this car on a passenger car would be folly.

Photos by Gene Stein

Some of the spectators shown here will probably go home and start copying one or more of the engines they saw running at this drag strip. It sounds like a good idea, but it doesn't work.

decay. Due to the ever increasing number of high performance items placed on the market it has become increasingly necessary to learn basic theory in order to make the proper selection of components. Knowledge of basic theory actually requires you to know less than if you attempt to memorize all of the hero combinations and their performance. If you know the reasons why, you won't have the eternal inner conflicts that arise from the difference of opinions passed on by the record holders.

Except for the finer points that add a few horses here and there, most of the things that are being done to engines today were worked out many years ago. Engineers and other experts in the field were fully aware of the many factors involved. Ignorance on the part of

Six carburetors and eight exhaust pipes boost the performance of Jarvis Earl's Buick 8 droppin' car. However, Jarvis knows better than to run similar equipment on his Buick 8 low-car!

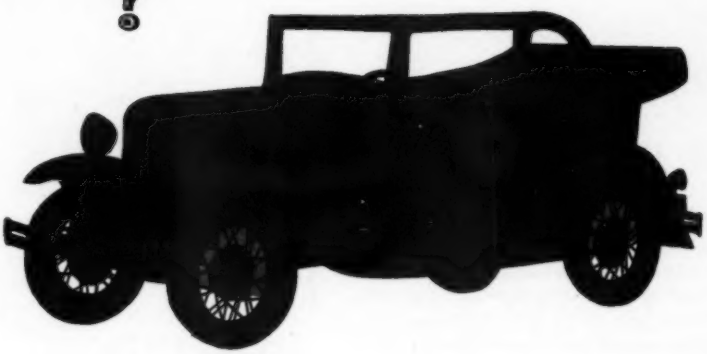
experts cannot be blamed for the long delay in applying many principles to the Detroit products. The underlying reasons are too numerous to discuss at this writing but we will indirectly touch on a few of them.

The fact that the Detroit product can be improved in certain regions by standard time-honored practices that have been applied for 30 or 40 years has caused many Dry Lakes heroes to employ these practices on the latest products. These procedures have been taken for granted to such a degree that only a very small number have questioned their value and bothered to make actual tests. Some of the customary modifications are actually detrimental to performance but the fellows that apply them are unaware of the fact otherwise they would discontinue. Others are going to needless extremes which are not a hindrance but nevertheless gain absolutely nothing.

"Speedy Joe" may be your guiding light because his collection of iron and aluminum set a record. You may say to yourself that he must have done the job right otherwise it wouldn't have gone so fast. Such a conclusion is perfectly logical with the limited number of facts passed on to the observer enthusiast. A magician produces illusions that we could very well accept as supernatural but in this enlightened age we know that more takes place than we actually see. In simple language, there is usually a trick. The trick in "Speedy Joe's" case is usually a can of nitro and kindred ingredients that make up for a breathing deficiency. Certain fuels can be employed that would completely eliminate the need for an intake valve. The concoctions could be squirted directly into the combustion chambers through nozzles. They would be explosive which means that they would carry their own oxygen so the breathing of air to obtain oxygen would be unnecessary. Joe can correct mistakes with $15 per gallon concoctions that pour through his en-

(Continued to page 57)

WhATSit ?



Psychologists tell us that the definitions of ink blots will give an insight to a person's mind. If this is so, then study the blot above and see if you can determine just what make and model of car is represented. Since this may prove difficult to some of our younger readers, we'll drop the rather broad hint that the car hasn't been manufactured for more than twenty years – though they are still quite often seen on the roads. Can you guess what it is?

Write your answer on the back of a postcard or a letter, send it along to "Whatsit?" Contest, ROD & CUSTOM Magazine, 4949 Hollywood Blvd., Hollywood 27, Calif. That's all there is to it.

Remember, do not include your "Whatsit?" answers in correspondence addressed to the other regular departments of ROD & CUSTOM.

Write "Whatsit?" where it can be plainly read on face of envelope or card.

Be sure to include your return address on your card or letter so if you are among the five winners, picked at random from among the correct answers, you will receive a one year subscription to ROD & CUSTOM.

Names of the five winners for this month's contest will be announced in the February issue of ROD & CUSTOM. The deadline for mailing entries is midnight, November 30th, 1954.

Even if you don't think you have a chance to win, send your guess in anyway. The odds are all in your favor – just try it and see.

The "Whatsit?" for August apparently proved to be a little difficult as the small number of responses indicates. The contest for that month included 4 questions. In case you didn't know the right answers, here are the solutions.

1. ***What is the fastest official speed of a steam car?*** **127.66 mph held by Frank Marriott in a Stanley Steamer. The record was set in 1906.**

2. ***When did Henry Ford build the first Model A?*** **1903.**

3. ***Who was the first man to officially better 100 mph in an automobile?*** **Rigolly in a Gobron-Brillie turned the flying mile in 21 3/5 secs., 103.55 mph, back in 1903.**

4. ***What is the Verneuk Pan?*** **An area in South Africa similar to California's dry**

(Continued to page 60)

How I foxed the Navy

by Arthur Godfrey

The Navy almost scuttled me. I shudder to think of it. My crazy career could have ended right there.

To be scuttled by the Navy you've either got to do something wrong or neglect to do something right. They've got you both ways. For my part, I neglected to finish high school.

Ordinarily, a man can get along without a high school diploma. Plenty of men have. But not in the Navy. At least not in the U. S. Navy Materiel School at Bellevue, D. C., back in 1929. In those days a bluejacket had to have a mind like Einstein's. And I didn't.

"Godfrey," said the lieutenant a few days after I'd checked in, "either you learn mathematics and learn it *fast* or out you go. I'll give you six weeks." This, I figured, was it. For a guy who had to take off his shoes to count above ten, it was an impossible assignment.

I was ready to turn in my bell-bottoms. But an ad in a magazine stopped me. Here, it said, is your chance to get special training in almost any subject—mathematics included. I hopped on it. Within a week I was enrolled with the International Correspondence Schools studying algebra, geometry and trig for all I was worth.

Came week-end liberty, I studied. Came a holiday, I studied. Came the end of the six weeks, I was top man in the class. Within six weeks I had mastered two years of high school math, thanks to the training I'd gotten.

I.C.S. made the impossible—easy!

DUALS

(Continued from page 31)

long enough to take care of even the shortest muffler. In our case, several inches had to be cut from the forward end of the pipe so the pipe could be positioned with the highest part of its rearward arch directly over the axle for maximum clearance. This also applied with the stock, left hand tailpipe since the original muffler was shorter than the one added. Brackets should be installed as near as possible to the rear of each muffler and to the rear of each tailpipe for maximum support. Any tendency for either pipe to move will give you more than your share of rattles. As soon as you think the installation is complete, hit the various pipes and mufflers with your hand. If no rattles occur, a road test will prove whether your check was as accurate as you thought.

It was with great apprehension that we started our engine and pulled out onto the street bordering Dave's shop. (Many years ago, this writer had the gall to equip a Chevy with individual head pipes – one for each exhaust port – and 4 harsh-sounding, 12" steel packed mufflers. Tailpipes – 4 of them – of 3

(Continued on page 66)

NAVARRO

(Continued from page 52)

gine at the rate of 2 gallons per mile. He may even have an engine that is the ultimate in design with nary a mistake and he still can improve performance with his speed cocktail. What he proves with his fuel guzzler has very little relationship to your street driven, gasoline burner.

The large amount of correspondence that we receive at ROD & CUSTOM indicates that the great majority of enthusiasts that are interested in engine modification are interested in improving road machines. They want the most for their efforts and money and wish to sacrifice the least. Interest in all out engines, with discriminating tastes for $15 per gallon fuel, is so small as to be almost non-existent. In spite of the desires of the majority, speed shops are plagued with inquiries for fuel injectors for large family sedans, 4 carburetor manifolds for Fordomatics and roller tappet cams to pull house trailers. These items all have their places and they are all capable of increasing horsepower output when properly used. However, we again see the ever present connection between speed records and the passenger car owner's desires. Because the highest horsepower is developed by a record breaker using one of the items, it is assumed that a great increase in horsepower will result if it is installed in the family sedan.

Four carburetor manifolds have their place on all nitro burners, but the installation of one on a Fordomatic burning gasoline will make your pride and joy accelerate like a 1929 Chevrolet. In high gear at speeds under 45 miles an hour the engine in a Fordomatic equipped automobile never turns over 2000 rpm. At such speeds, the single dual throat carburetor will supply all of the gasoline and *air* that the engine needs. Not only all that it needs, but all that it will breathe will be supplied by the stock carburetor. Dual carburetion or

(Continued to page 58)

NAVARRO

(Continued from page 57)

a 4 throat will improve breathing over 2000 rpm but not under that speed.

The above information will lead one to believe that the Fordomatic is a hopeless thing from the standpoint of carburetion. Our choice of the foregoing conditions was made expressly for that reason and so that we could point out the effect that one's driving habits can have no speed equipment selection. Maybe you don't putter around in high gear all the time – maybe you wind it up in second – perhaps you like to scream the engine up to 50 in low gear. If you're a low gear artist and don't mind sacrificing some low rpm performance, you might even go so far as to use 3, or even 4, carburetors.

We met a fellow 3 years ago that had dual carburetion and a full race cam in his Fordomatic. There was no displacement increase or compression ratio increase to improve low rpm torque so his complaint was something to the effect that it was "limp". We agreed, it didn't accelerate as well as a stocker. Further interrogation brought out the fact that acceleration was pretty good between 40 and 55 mph in low gear. We have yet to meet the man that is willing to sacrifice all around performance so that he can have a little extra zip at the speed range indicated above.

Actually the desire for fuel injection on passenger cars shouldn't be ridiculed because many of the articles that appear in the various automotive publications are really responsible. A super-speed job gets a write-up and the virtues of its fuel injection system are lauded to the skies. Comments are made to the effect that better economy is obtained with fuel injection but no mention is made of the type of fuel being used. The mislead reader naturally thinks that gasoline, the most common of fuels, is what is being talked about. Of course, if the articles stated that alcohol or alky nitro concoctions are

(Continued to page 61)

FREE!

TO MEMBERS OF KUSTOMS OF AMERICA

Sanctioned by George Barris, foremost custom car creator and designer

ADDED BENEFITS FOR CLUB MEMBERS:

- Discounts on Leading Monthly Automotive Magazines
- Upon Request, Assist Forming Local Club & Show
- Yearly Club & Single Trophy Presentation In Each State
- How To Do It Articles & Speed Performance on Your Car
- Kustom Enthusiasts' Complete Restyling & Price Lists
- Periodical Mailing on Specials for the Kustom Fan

No car necessary. Club open to men and women.

KUSTOMS OF AMERICA **ONLY $2.00**

5864 Hollywood Blvd.,
Hollywood 28, Calif.

I hereby apply for membership in the Kustoms of America and enclose $2 for one year's dues, entitling me to receive an official membership card, windshield decal, and discount catalogues with full association benefits.

NAME ..... AGE .....

STREET ADDRESS .....

CITY ..... STATE .....

CLUB AFFILIATION (If any) .....

Please print plainly. Application blanks are not required. A letter will suffice.

RC-11

SUPERCHARGING

(Continued from page 41)

from the distributor advance unit to the "tee" fitting provided in the hose from the blower to the fuel pump had to be connected. A wire from the primary side of the ignition switch was connected to the pressure diaphragm. The supercharger duct connecting the blower outlet port to the air horn of the carburetor was installed and the hose that transmits blower pressure to the secondary throttle control was connected up. The inlet grille and the special air cleaner, along with their appropriate hoses were installed, completing this phase of the operation. A wire was attached to the post of the pressure diaphragm switch to supply current to the Bendix electric fuel booster pump.

As the installation was done on this particular make and model car, the pump is under the floor of the trunk compartment. After the wire from the switch was connected and the fuel lines attached from the tank to the pump, and then on forward up to the mechanical fuel pump, the booster was ready for operation. Connecting its wiring to the pressure diaphragm switch insures that it only operates when needed, that is, when the supercharger boost pressure is high enough that additional fuel

WHATSIT?

(Continued from page 53)

lakes but extending for 20 miles. Several records have been set there but due to the inaccessability of the spot, Bonneville, Utah, is the one place now used for top speed.

The following five people correctly answered the above four questions, and for so doing they will receive a year's subscription to ROD & CUSTOM beginning with this issue.

Frank Stroud, Milwaukee, Wis.; Oliver Sorenson, South Gate, Calif.; Eric Pembrook, Capetown, South Africa; Betty Elliot, Chicago, Ill.; Carl Hanson, Miami, Fla.

Congratulations, all. Winners having a subscription at the present time will automatically receive a twelve months' extension. The fact that the above named people won the August "Whatsit?" contest in no way limits their chances of winning once again. ●

pressure is required. The car is now ready for road testing and final adjustment. The particular installation we witnessed at Paxton Products fired right up after the work was completed and required no further adjustment at all. The most that is ever required is to adjust the spark lead of the distributor to provide the maximum performance possible without detonation. If the car's ignition system is in top condition and premium grade gasoline is used, no trouble will be encountered. It is recommended that a cooler heat range spark plug be used, so in this particular installation on Alvin Canup's Mercury the stock plugs, Champion H-10's, were replaced with the H-8 variety. As the accompanying photos will attest, Alvin was very happy with the car's new performance!

Incidentally, the performance boost the McCulloch Supercharger offers can be judged to a certain extent by the improvement it makes when installed on the M.G., a car which has never been famous for breath-taking acceleration. The blower equipped M.G. can accelerate right with a new Olds up to 70 mph! All inquiries regarding the McCulloch Supercharger should be directed to Paxton Products, 327 W. Olive Ave., Inglewood, California. ●

NAVARRO

(Continued from page 58)

used, there would be no inquiries for passenger car fuel injectors.

Fuel injection in its present popular form is made practical for the record holders by the large flows that are required with alky and nitro. The quantity of fuel used per intake stroke is anywhere from 3 to 10 times the amount as compared to gasoline consumption. Due to such large flows, considerable errors in mixture have small effects percentagewise. The infinitesimal quantity of gasoline that an engine uses for low speed performance and idling, just cannot be handled by the present fuel injector setups. ●

CUSTOM TIPS

TUBING

Where may I purchase some 3 inch diameter tubing like that used by Barris in rebuilding the grille shell of a '52 Oldsmobile that you featured not long ago?

Chester Cook — Troy, N.Y.

• *We know of no specific shop in your area, Chester, however if your local muffler shops or parts stores cannot help you, drop by a sheet metal shop. Could be they might roll some up.*

POWERED DECK

I'd like a tip on opening deck lids by power and I would also like to correspond with other car enthusiasts about 14 or 15 years old.

John Kerekes — 4826 W. Haddon Chicago 51, Ill.

• *'40 Ford convertible top motors are easily adapted to deck lid operation. If your nearest wrecking yard can't supply you, hydraulic cylinders of the type used on aircraft will work satisfactorily by vacuum. Check with a surplus store for this.*

HOOD TROUBLE

Our '49 Hudson has never been in an accident, as far as I know, yet one corner of the hood is approximately ¼ inch higher than the other. How can I rectify this situation?

Donald Mickely — Portland, Ore.

• *Your hood can be adjusted by moving the hinge in the direction required in relation to the cowl. Loosen the assembly bolts, though not enough that the base plate will move of its own accord. Then, lightly tap the assembly with a hammer to move it whichever way is needed.*

HOOD CONVERSIONS

I would like to know if any model '49 through '53 Oldsmobile hood will fit a '53 Buick Special.

Steve Moore — Rock Hill, So. Carolina

• *No – not without modification.*

I'd like to remove the two-piece hood on my '48 Dodge and replace it with a one-piece unit so it can be smoothed and filled. Is any hood interchangeable with mine?

Werner Anderson — Rockford, Ill.

• *No – unless you are willing to go in for extensive rework to achieve the "smooth" appearance.*

CUSTOM TIPS

I have a '53 Chevrolet Bel Air that I would like to restyle slightly. I have never done this sort of work before so would prefer taking it to a professional shop. Do you have any suggestions as to what modifications would be possible for the least amount of money?

Don Chambers — London, Ont., Canada

• *See "Brothers Under the Skin" in R & C for Sept., '54.*

BULL NOSE FOR HOOD

After seeing several photos of customized '36 Fords I noticed that they had a "bull nose" in place of the original ornament. I have tried all the local speed shops but they say no such item is available. Can you help me as I would like to eliminate the nose ornament of my '36?

Jerry Roethlisberger — Saginaw, Mich.

• *Yes. Eastern Auto at 3319 So. Grand Ave., L. A. 7, Calif., stocks the "bull noses".*

CHANNELING VS. Z-ING

A friend and I are having an argument. He says that Z-ing a frame is part of channeling and I say the two are separate operations, the one not being dependent upon the other. Who is right?

Doyle Borchert Sheppard AFB, Texas

• *A car can be channeled without the frame being Z-ed and vice versa.*

HOOD LATCH

In a recent issue you suggested that a reader use a '48 Chevy trunk latch assembly for opening the hood of his '37 Ford from the inside. I would like to know if the same holds true for a '40 Ford.

Robert Paterson Brooklyn, Mich.

• *Yes, although a little modifying to the latch assembly will be necessary.*

SILVER STREAK

I have a '41 Pontiac that I would like to customize but the hood's Silver Streak hinders progress. Someone suggested removing only the ornament from the hood strip, filling the holes and having the strip re-plated. Is this advisable?

Robert Bloys Fresno, Calif.

• *It has been done to good advantage on many various-year Pontiacs.*

TOP LATCH PROBLEM

The latches that secure the convertible top to the windshield of my '40 Ford are in sad condition. I have looked in every junkyard and parts store for miles around and can't find any new ones. Can you suggest a place I might try? The rest of the car is in very good condition but those top latches — nowhere!

Fred Branson Gainesville, Fla.

• *If you have exhausted all the possibilities of finding new top latches, they could be duplicated from steel or cast using the disassembled, original latches as forms.*

EDITORIAL

(Continued from page 5)

dim his. No soap! The guy behind happily leaves his on high-beam knowing that his twin beams of light are reflecting from your rear view mirror full into your face. Once again they are enjoying recognition at the same time showing that they dislike having been passed. Or maybe a flick of the left foot on the dimmer switch is just too darned much trouble.

There is no known cure for this highway menace — unless you care to give him a severe tongue lashing when he pulls to a stop at a signal or if he halts his bug-eyed monster at a roadside service station.

If you don't know when to use high-beam and when not to, just watch the truckers. They know the courtesies of the highways. Forget to drop your lights when approaching one of these highway behemoths and you might receive the same blinding treatment in return. More than likely, however, he'll pass you with his beams on low, raising them only when he is sure they will not strike your eyes. Overtake a truck and he'll drop his lights as soon as you are even with the cab. Not until you are far out in front will his lights return to high. But, be sure to dim your own lights when passing him. Pull out to go around a truck with your high-beams bouncing off his mirror and you'll get a taste of your own medicine when you have passed. High-beam! Right in your own rear view mirror.

Let's all observe the unwritten laws of the highways and keep our headlights down — unless the road ahead is free of oncoming traffic. As soon as an approaching car tops a rise or rounds a bend and you are able to see his lights, kick the dimmer switch. Chances are you'll receive the same kind treatment in return and the darkened highways will become reasonably safe once again. Let's leave the high-beams for the squirrels. ●

Car Information by the CARLOAD!

Now! The Newest... Most Complete Catalog Directory ever printed! Yours free!

Hundreds of photographs . . . dozens of sketches . . . page-after-page of special descriptions . . . scores of charts and detailed technical data—all for the speed, power, economy and custom enthusiast. You'll find all this, and more, in the latest issue of the most authoritative catalog-directory in the automotive specialty field—the gigantic Newhouse Hi-Performance Equipment Catalog! And, it's all yours . . . *simply mail the coupon below!*

This exciting book is more than just a catalog . . . it's a complete photo album and directory of all the latest and best speed, power, custom and economy equipment on the market today . . . for *all* makes of cars, including every 1954 model. It lists technical specifications and rock-bottom prices for everything from a "hunk of wire" to complete, ready-to-run full-race engines, including hundreds of special parts that can't be found in regular stores anywhere! It tells you *what* you need . . . *why* you need it . . . and *how much* it costs!

You'll want your complimentary copy right away . . . so clip the coupon below. Your copy of the sensational Newhouse Hi-Performance Equipment Catalog will be sent to you free. Just send 25¢ (coin or stamps) to cover postage and handling.

FREE!

Amazing New Power Calculator Sent With Your Copy

Newhouse
AUTOMOTIVE INDUSTRIES

MAIL THIS COUPON TODAY!

NEWHOUSE AUTOMOTIVE INDUSTRIES, Dept. R37
5805 East Beverly Blvd., Los Angeles 22, Calif.

Gentlemen: Please rush my copy of the 1954 Newhouse Hi-Performance Equipment Directory today! Enclosed is 25c to cover postage and handling. Be sure to include my free Power Calculator.

Name _____

Address _____

City _____ Zone _____ State _____

DUALS

(Continued from page 56)

inch diameter brass tubing extended, without bends or curves, seven feet rearward beneath the car and thus comprised one of the weirdest exhaust systems to date. Needless to say, a slow idle resulted in a sound comparable to the ringing drum beat of an African savage. At top speed, the car gave forth ear-splitting blasts of many decibals.

A push on the throttle eased our earlier fears for the sound was scarcely audible above average traffic noises. There was no question, though, that the car had duals for an unmistakable tone could be faintly heard. The tone was wonderful, the volume low. The result? Perfection in our estimation.

Upon our return to the shop, Dave put the Chevy back up on the hoist and gave the installation another careful check – as he personally does all of his customer's cars. Thorough tracing revealed no leaks or rattles, everything was shipshape. "All in a day's work," Andy is quoted as saying and Dave Mitchell was quick to agree. ●

NEW! GIANT 1954 CATALOG OF Automotive Parts and Accessories

50,000 ITEMS! 148 PAGES!

World's LARGEST Selection... Everything for Your Car, Truck, Custom-Styled Car, Hot Rod...and

You Save UP TO 50%

Parts and Accessories for 1920 to 1954 Models—Everything at Lowest Prices!

Here are just a few of the 50,000 items in world's most complete automotive line:

. . . plus thousands of HARD-TO-GET PARTS and all at LOWEST PRICES:

- High-speed equipment
- Tires and tubes
- Engines and parts
- Auto Radios
- Transmissions and parts
- Custom-Styling Accessories
- Tools
- Radiators
- Springs and Shocks
- Ignition parts

It's ready for you now . . . this giant ALL NEW 1954 J. C. Whitney Catalog of Auto Parts and Accessories! Here's the one and only *complete buying guide* for everything you need for your car, truck, custom-styled car or hot rod . . . the biggest, most complete selection of top quality parts, accessories, and equipment at *rock-bottom money-saving lowest prices!* See the thousands and thousands of items for every make and model car . . . even the brand new 1954 models still on the showroom floor!

Do you need *hard-to-find parts?* We have them! We feature many new *Hollywood accessories*—now offered for the very first time . . . and *high-speed parts* to soup up your engine to top speed, faster acceleration, greater economy. And you'll see pages jam-packed full of *custom-styling equipment*, to give your car that "expensive" look!

We buy in tremendous volume to get the lowest possible cost . . . and we pass our savings on to you.

Be sure you get *your* J. C. Whitney catalog! Mail coupon TODAY, we'll rush your copy for only 25c . . . to help pay postage and handling. We will credit your 25c on your first order of $5.00 or more, which means that this valuable catalog will then be FREE TO YOU. Don't miss out on this offer. Mail the Coupon NOW!

J. C. WHITNEY & CO., 1917 U-11 Archer Ave., Chicago 16, Ill.

FREE GIFT— IF YOU MAIL COUPON AND 25¢ TODAY

we'll include — ABSOLUTELY FREE — an amazing valuable new Safety Chart that shows you exactly how to know if your car is safe. This special chart may save you hundreds of dollars in repair bills—and it's yours FREE for promptness. Supply is limited, so mail Coupon TODAY!

MAIL THIS COUPON TODAY!

J. C. WHITNEY & CO., 1917 U-11 Archer Ave., Chicago 16, Ill

Please rush your giant 148-page 1954 Catalog describing world's most complete line of auto parts and accessories—over 50,000 items at lowest prices. I enclose 25¢ to cover part of cost, to be credited on my first $5.00 order.

Name_____

Address_____

City_____ Zone____ State_____

Quick Delivery

SPEED SHOPS, GARAGES, CAR DEALERS
SAVE TIME AND COSTLY SHIPPING CHARGES
BUY AT CALIFORNIA PRICES F.O.B. OUR WAREHOUSE

LOOK

At This "Who's Who" of Brand Names

BELOND
EDELBROCK
EDMUNDS
FORGED TRUE
GRANT RINGS
HARMAN-COLLINS
H-C PRODUCTS
HELLINGS
ISKENDERIAN
JAHNS
KONG
MALLORY
McGURK
OFFENHAUSER
RAJO
SCHIEFER
AND . . .
MANY OTHERS!

SPEED SHOPS
GARAGES
CAR DEALERS

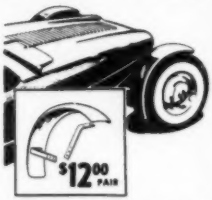
Send for Free Catalog and Discount Sheet on Your Letterhead

CUSTOM GRILLE BARS

Individual styling at low cost and simple installation—Enhances the beauty of your car's lines. Heavy gauge steel with super Hi Gloss Chrome Plate. All bars fit parking lights perfectly.

	Deluxe
1954 Ford	$19.95
1953 Ford	7.50
1949-52 Ford	19.95
1949-50 Merc	19.95
1951 Mercury	22.50
1953 Chevy	12.95
1954 Chevy	14.95

HOT ROD FENDERS



Made of 20 gauge steel. Contoured to fit all automobile tires. Universal mounting brackets adapt to standard brake backplates. Prime finished—ready to paint.

CADDY HEADLIGHT RIMS

One style rim fits all cars listed and also many earlier model cars with round rims.
No. HR-400 – 'Caddy' Headlite Rims
$6.95 pair
Fits all Fords 52-53.

No. HR-300X – 'Caddy' Headlite Rims $6.95 pair

Buick	1949-52	Hudson	1954
Cadillac	1948-49	Kaiser-Fraser	1947-52
Chevrolet	1949-52	Mercury	1949-51
Chrysler	1949-50	Oldsmobile	1948-50
DeSoto	1949-54	Packard	1948-53
Dodge	1949-54	Plymouth	1949-54
Ford	1949-51	Willys	1946-53
Henry J.	1951-53		

SAF-TEE-BELT

Used as a safety factor in race cars and airplanes, now available for your car in colors to match your upholstery—Gives body support for easier driving — Easily installed in just minutes.
Double Belt Assembly - $29.50
(2 passengers)
Single Belt Assembly - $14.95
Endorsed by Safety Authorities.
Satisfaction GUARANTEED or money back.

McRAY PROTECTO RODS

Prevents rust, scale and corrosion in radiators and engines —Completely harmless to water, rubber and metals.

NEW CATALOG . . . 50¢
Refunded On First Order

Midwest AUTO SPECIALTIES
DIRECT FACTORY DISTRIBUTORS
formerly MIDWEST RACING EQUIPMENT

13907 R. Miles Ave., Cleveland 5, Ohio •
Wyoming 1-5977
Wyoming 1-4900